

# BI FOLDING DOORS

Technical Manual



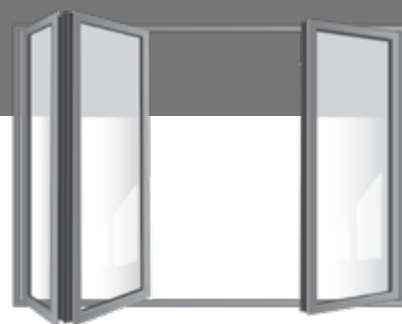
HOMEVIEW

REVISION 1.1



Our technical manual covers everything you need to know about bi-folding doors.

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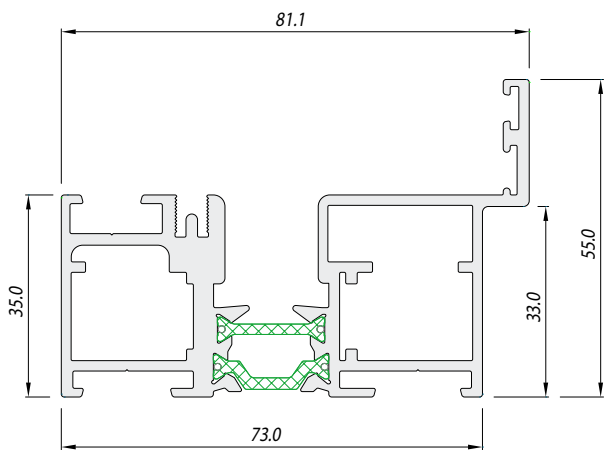
## Options

- 1 Star Cylinder ▶
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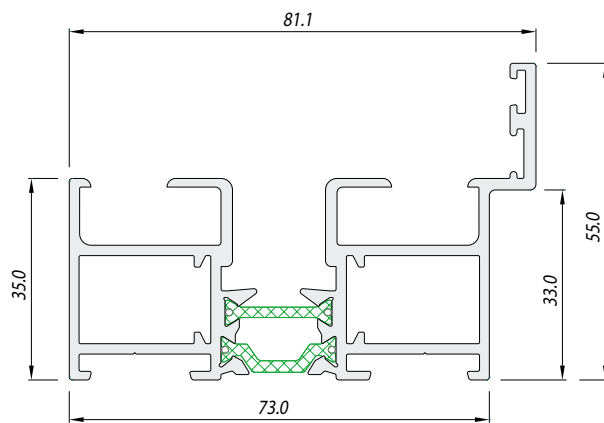
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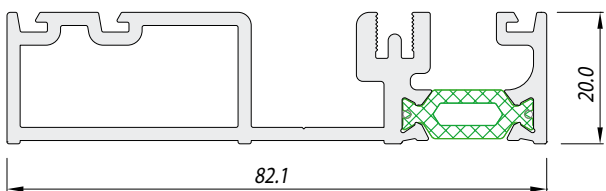




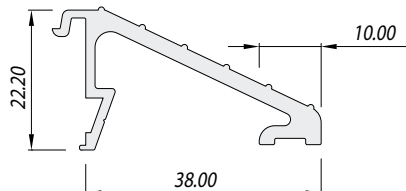
**Standard Threshold**  
**DBE-001**



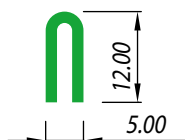
**Head/Jamb Outer Frame**  
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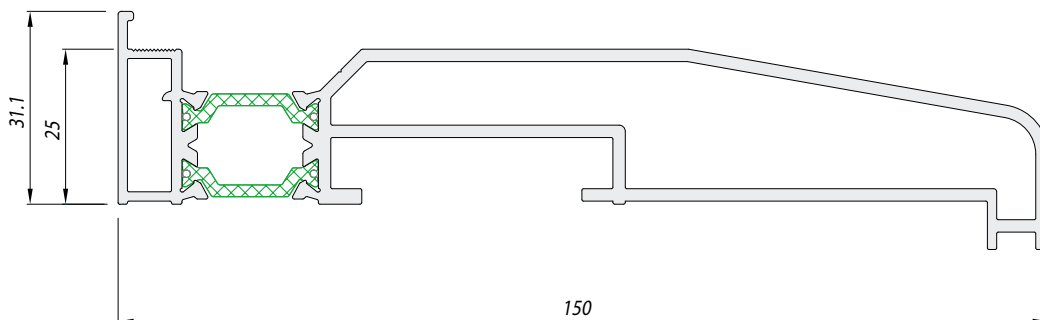
**Low Threshold**  
**DBE-004**



**Low Threshold Ramp Add-on**  
**DBE-301**

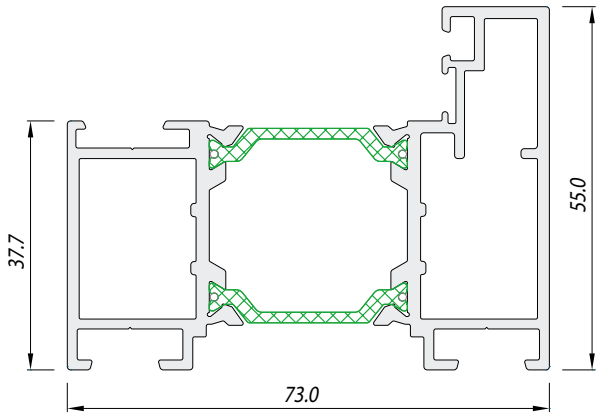


**Stainless Steel Running Track**  
**DBPR-001**

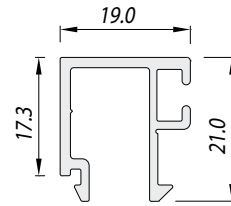


**150mm Drainage Sub Cill**  
**DBE-011**

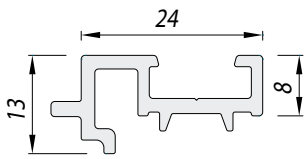




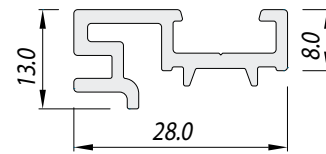
**Slim Sash**  
DBE-101



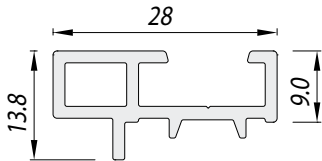
**Glazing Bead for 28mm DGU**  
DBE-170



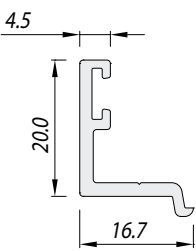
**Door Lock Adapter**  
DBE-204



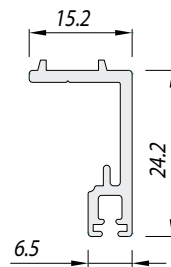
**Lock Keep Adapter**  
DBE-205



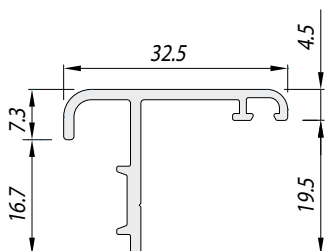
**Half Roller Adapter**  
DBE-206



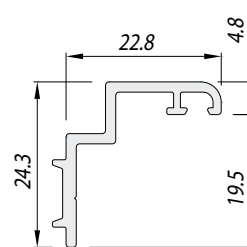
**Low Threshold Cill Rebate Add-On**  
DBE-302



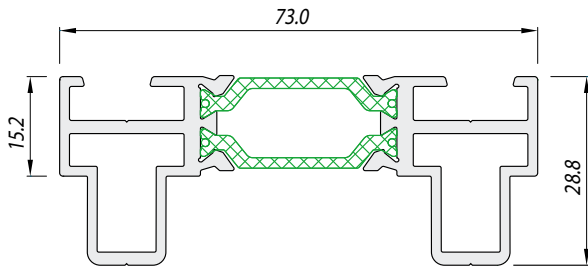
**Sash Extension**  
DBE-303



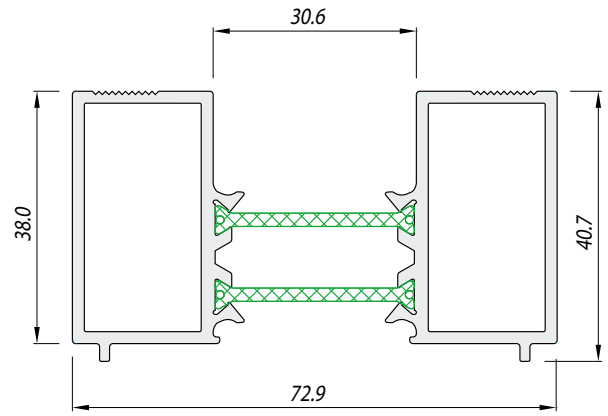
**Swing Door Rebate**  
DBE-304



**Swing Door Rebate For Adjustable Jamb**  
DBE-305



**Adjustable Jamb**  
DBE-201



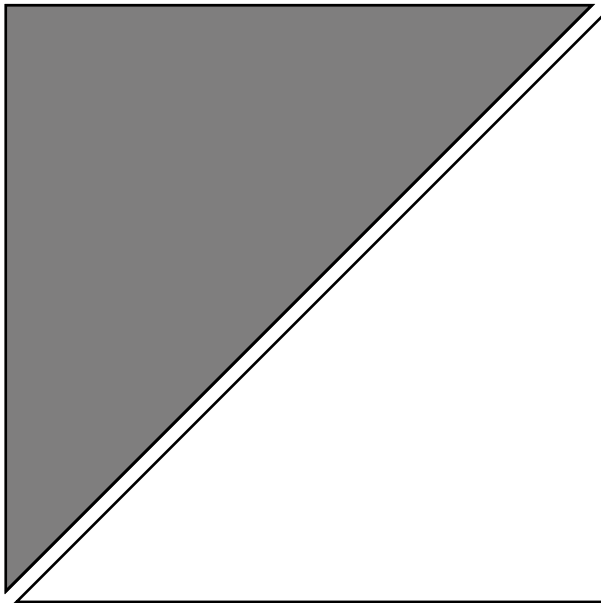
**38mm Frame Extender**  
DBE-203





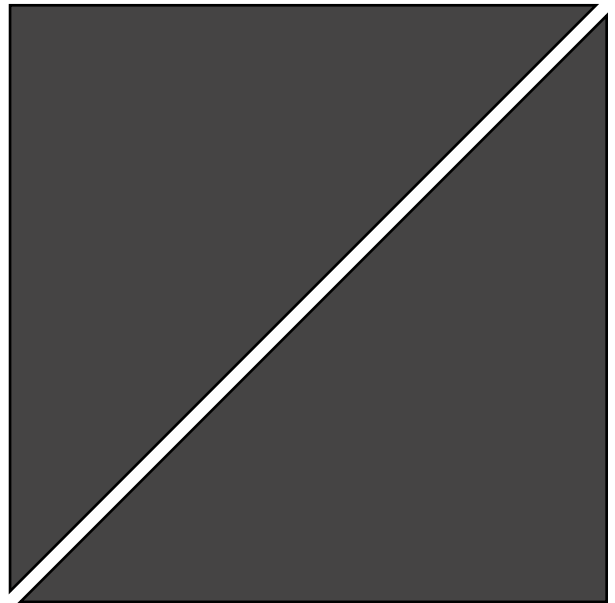
## Profile Colours

External  
Matt Anthracite (7016)



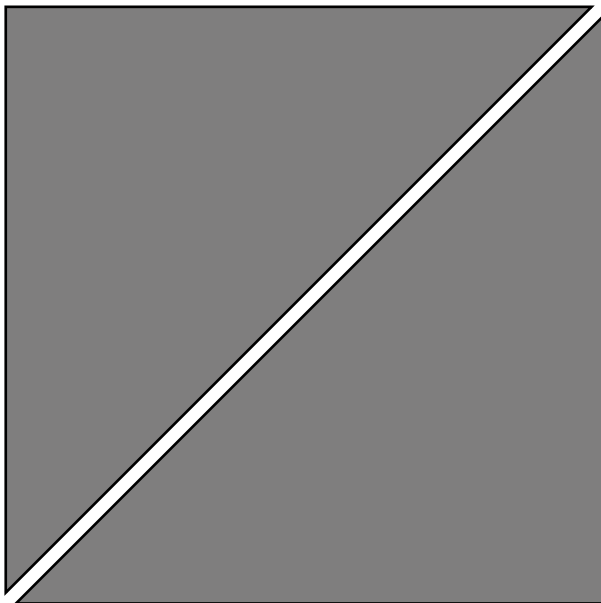
Internal  
Gloss White (9016)

External  
Matt Black (9005)



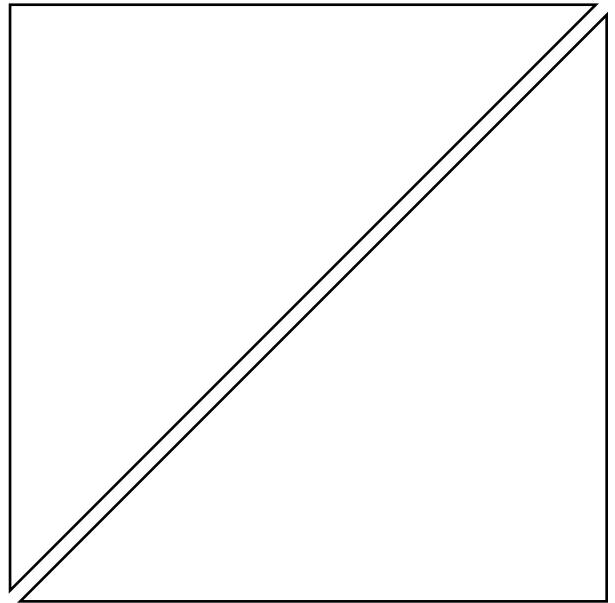
Internal  
Matt Black (9005)

External  
Matt Anthracite (7016)



Internal  
Matt Anthracite (7016)

External  
Gloss White (9016)

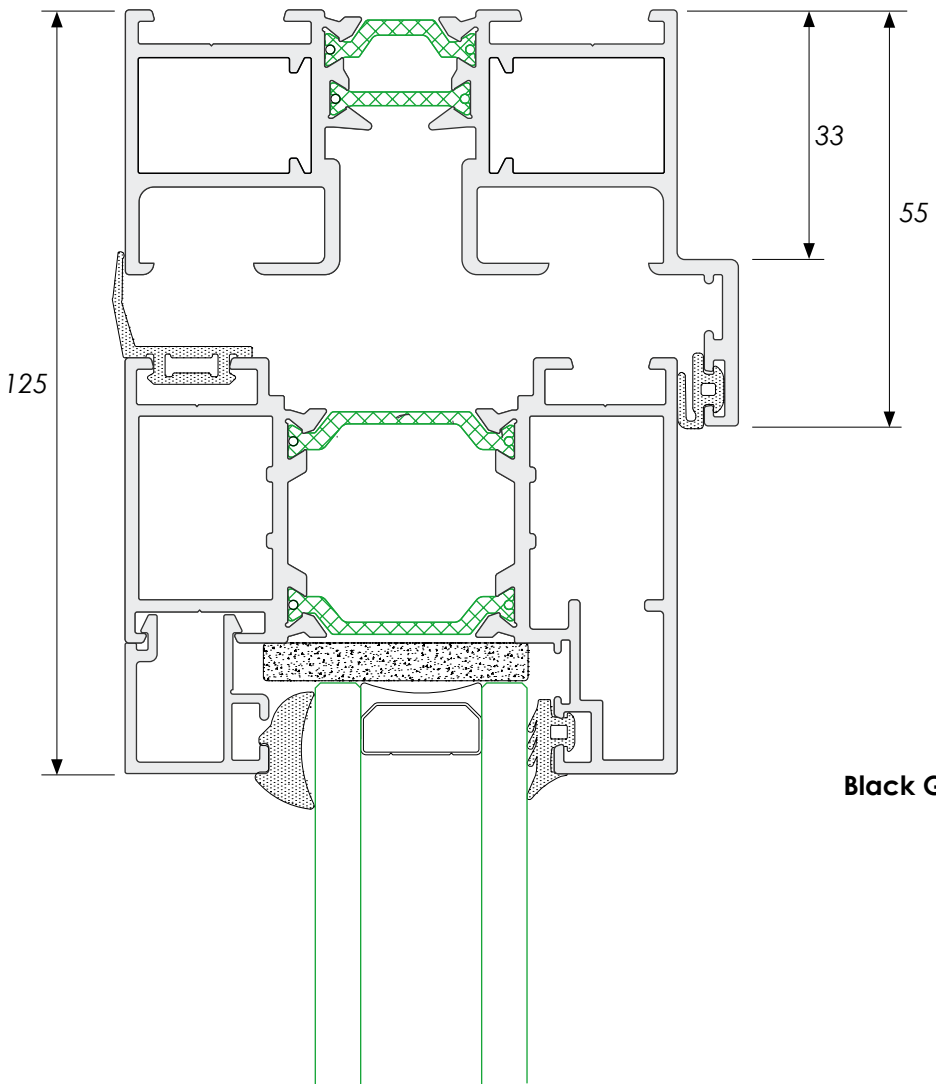
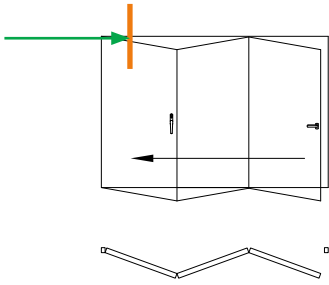


Internal  
Gloss White (9016)



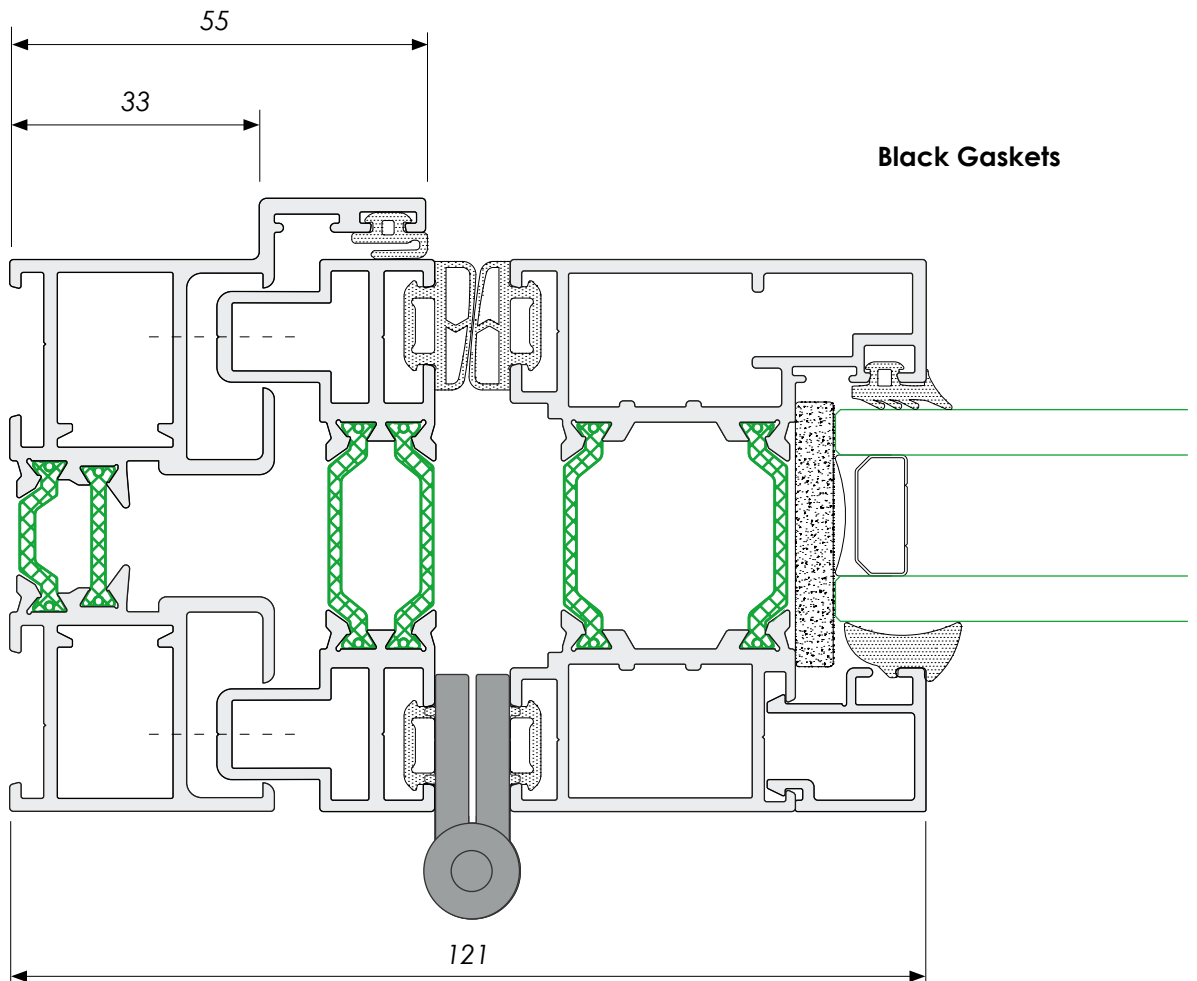
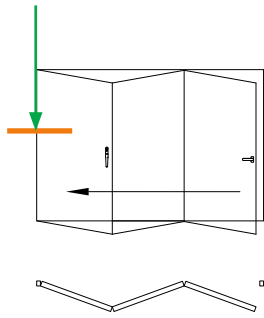


## Head





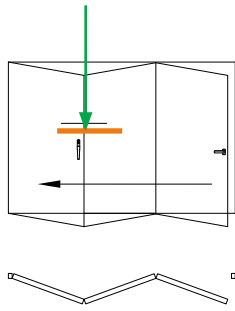
## Outer Frame Detail with Adjustable Jamb



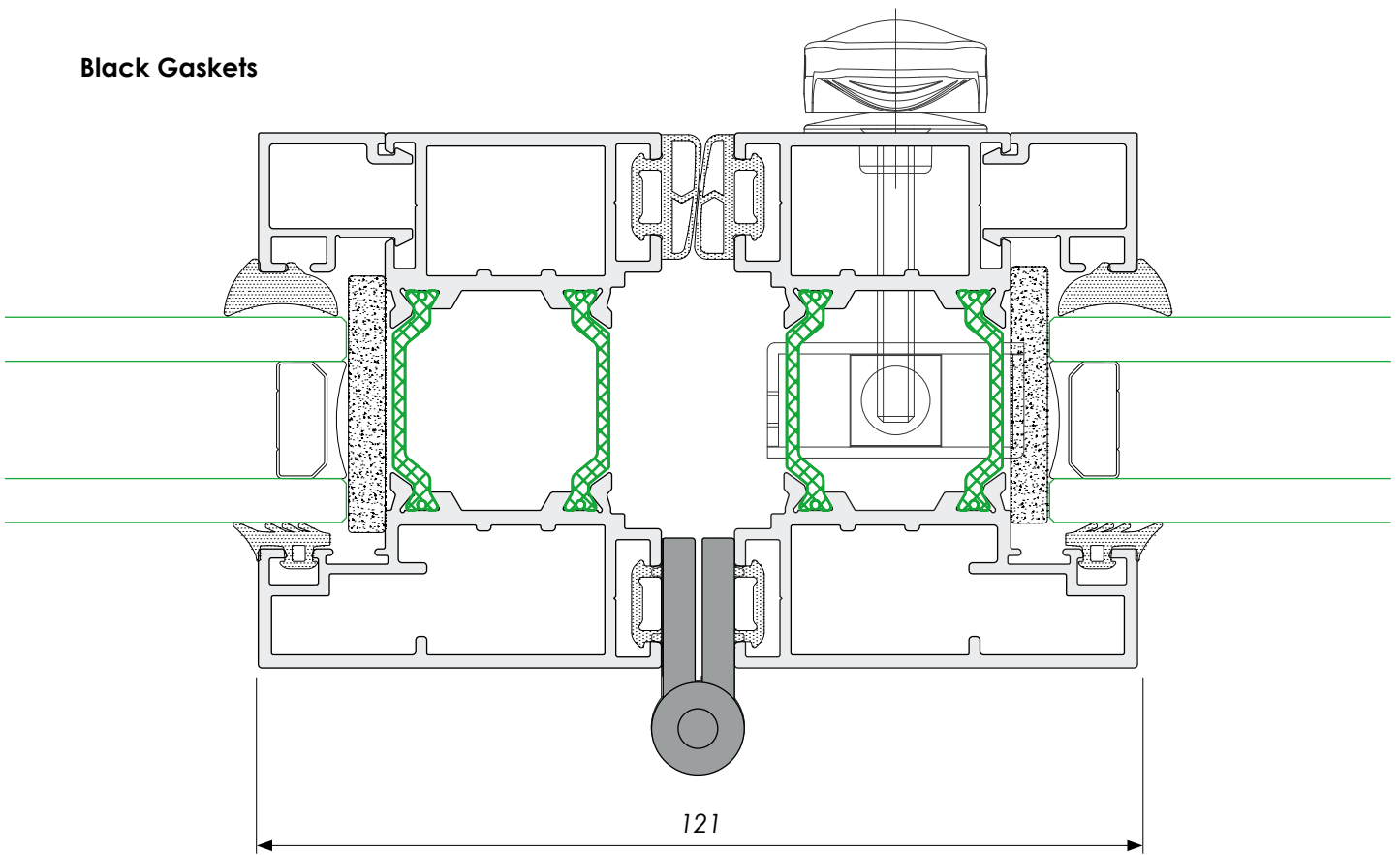




## Doors with Hinge

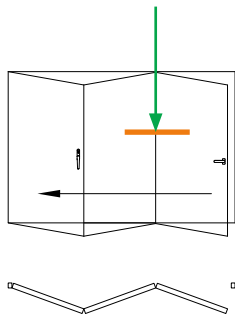


### Black Gaskets

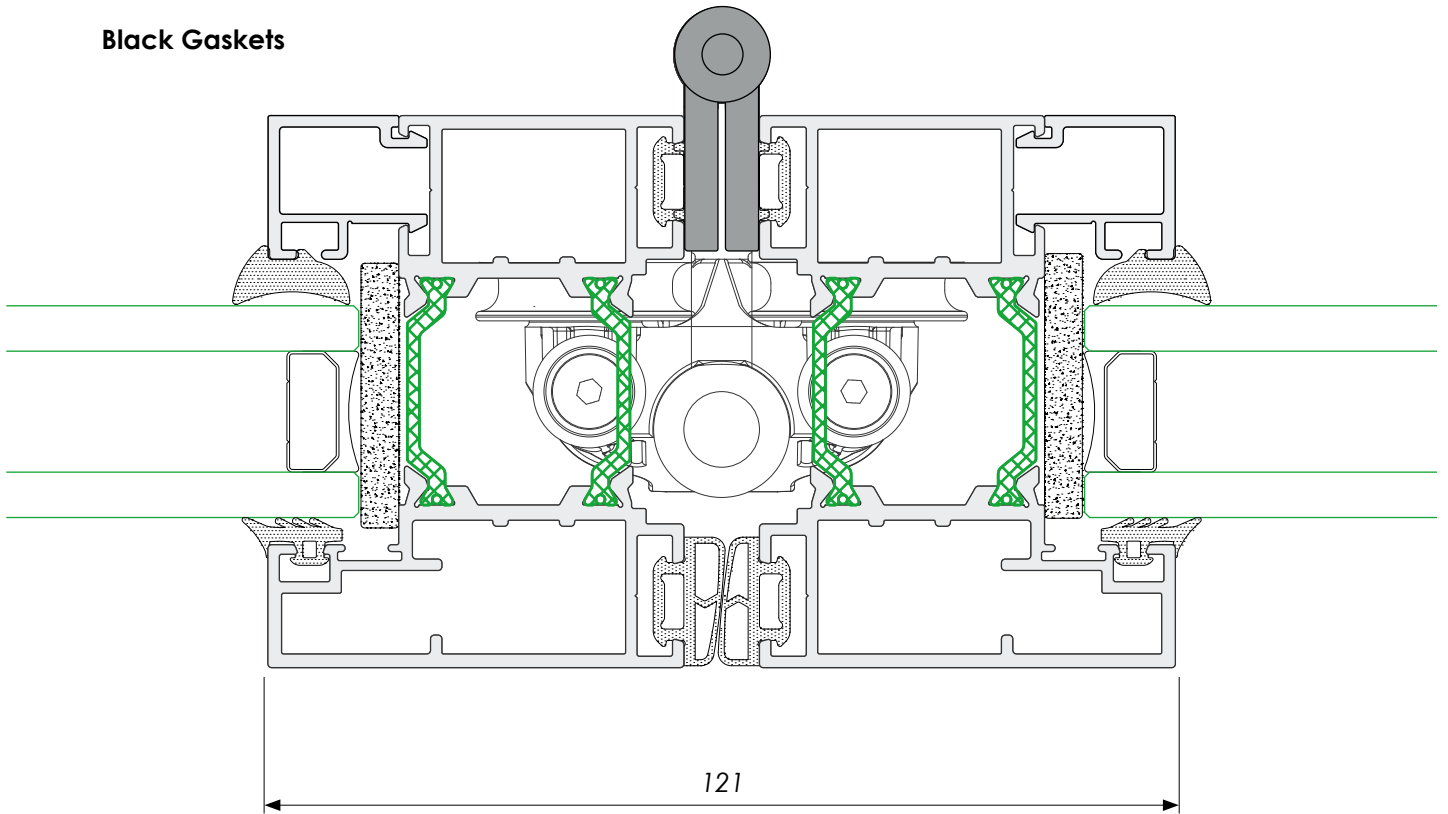




## Doors with Hinge and Roller

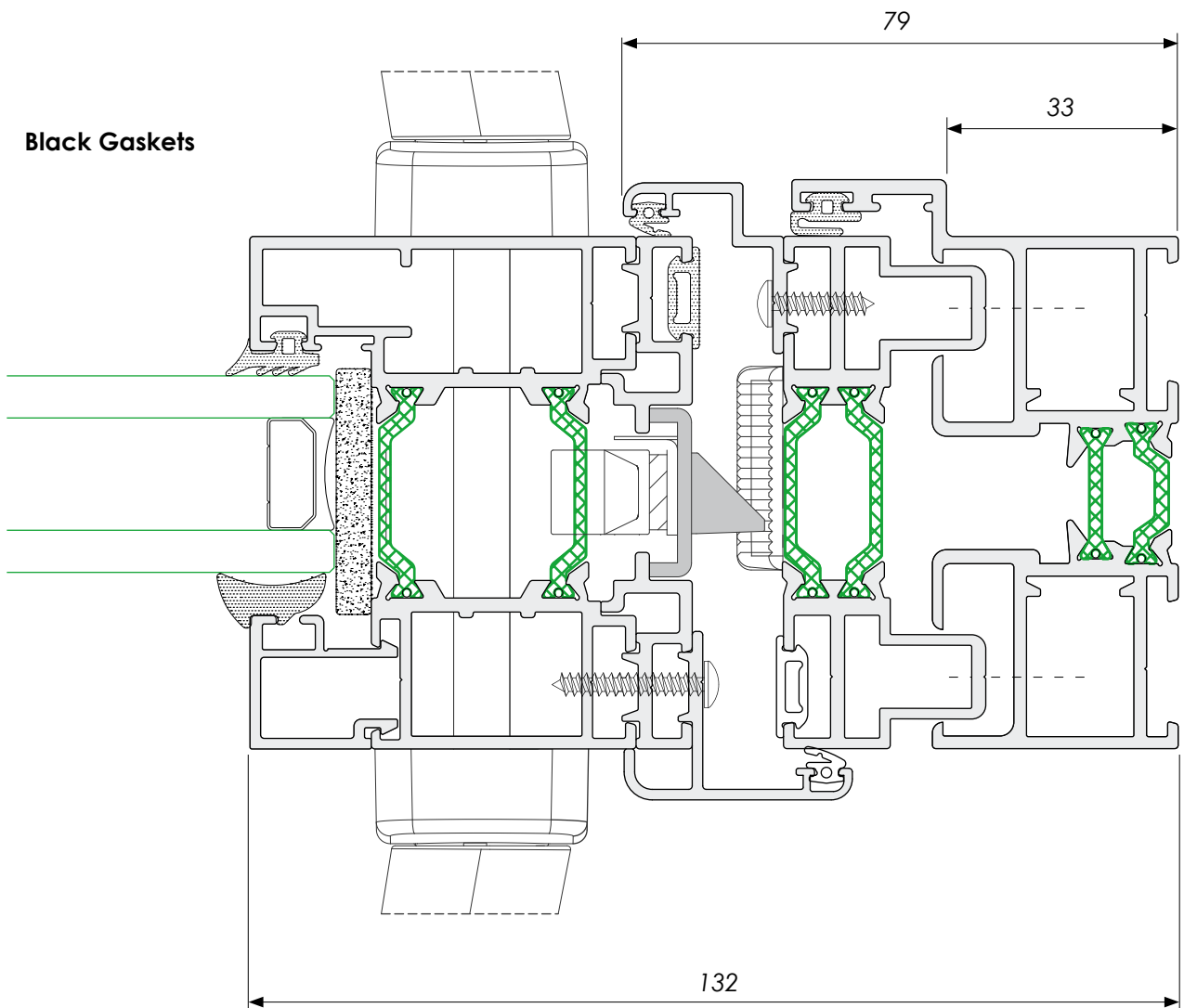
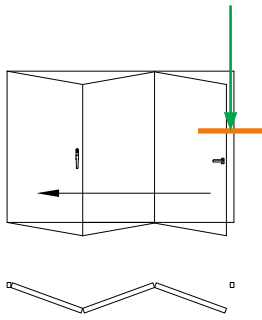


### Black Gaskets



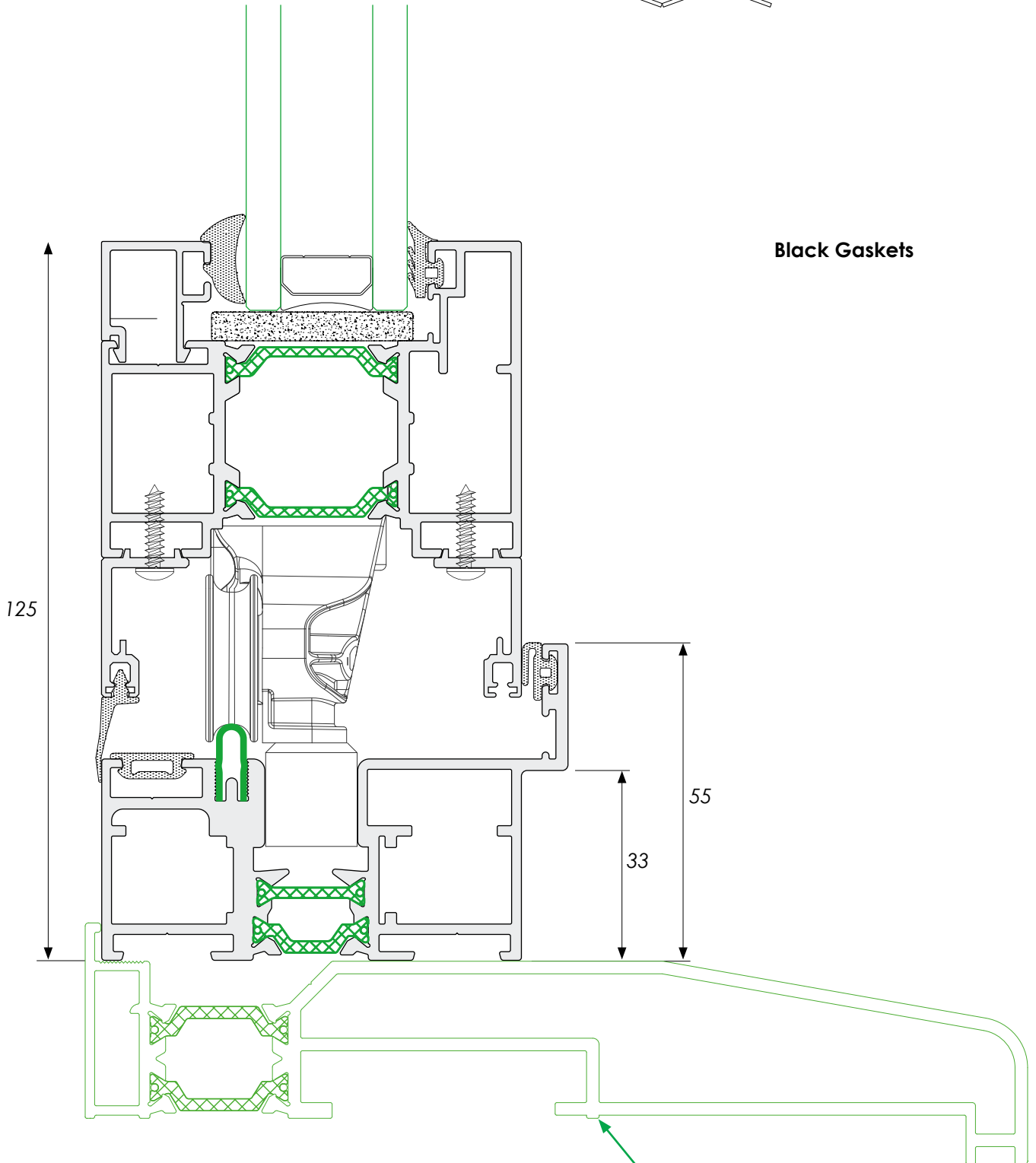
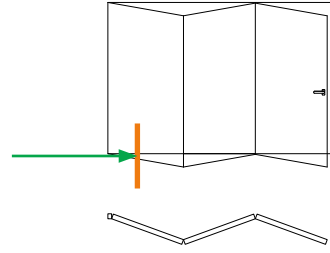


## Traffic Door and Outer frame with Adjustable Jamb





Standard Threshold



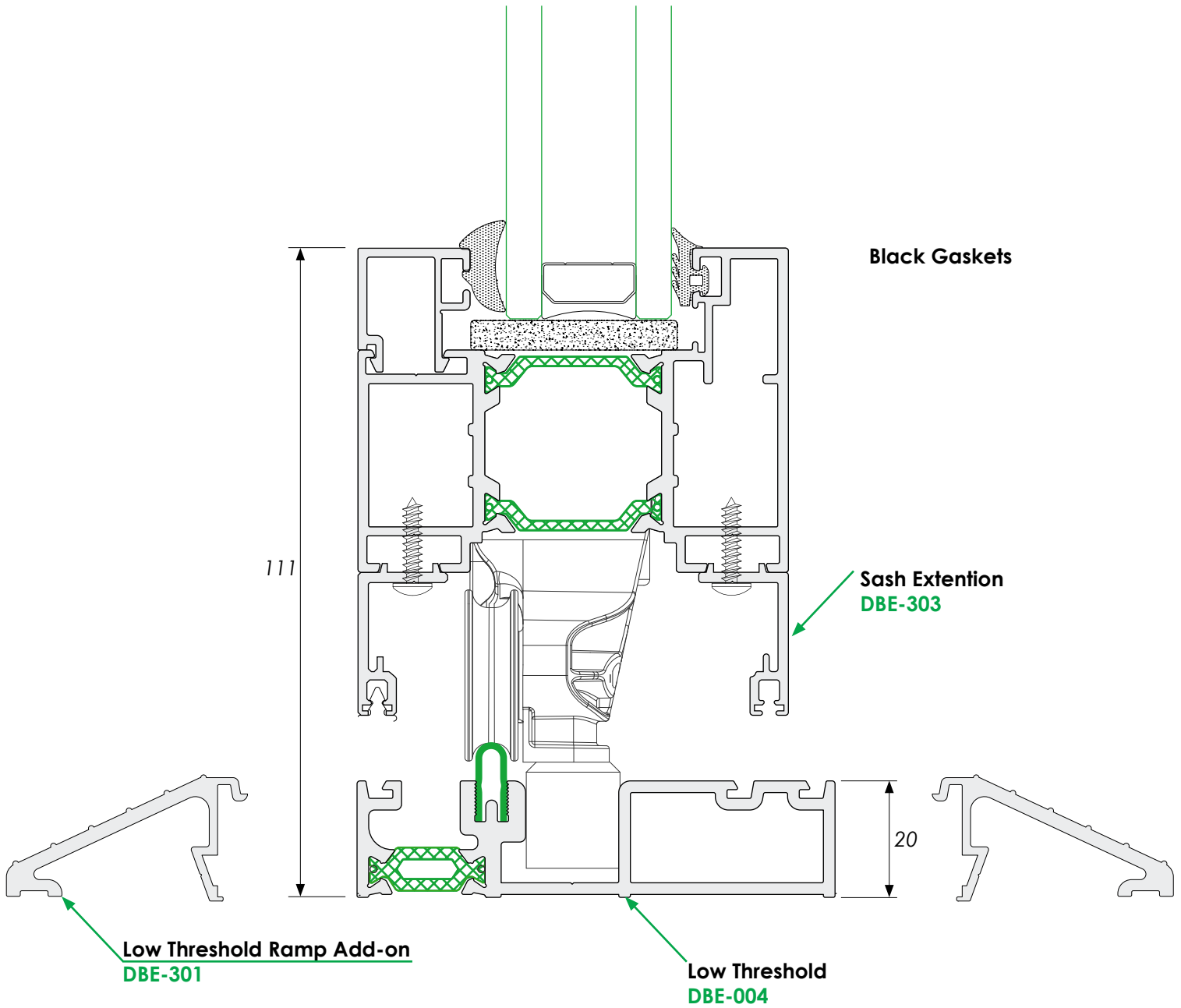
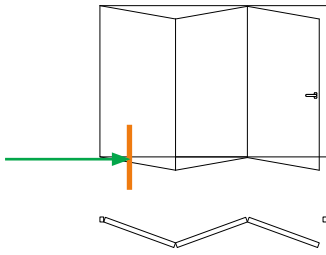
Black Gaskets

Optional 150mm Drainage Sub Cill  
DBE-011



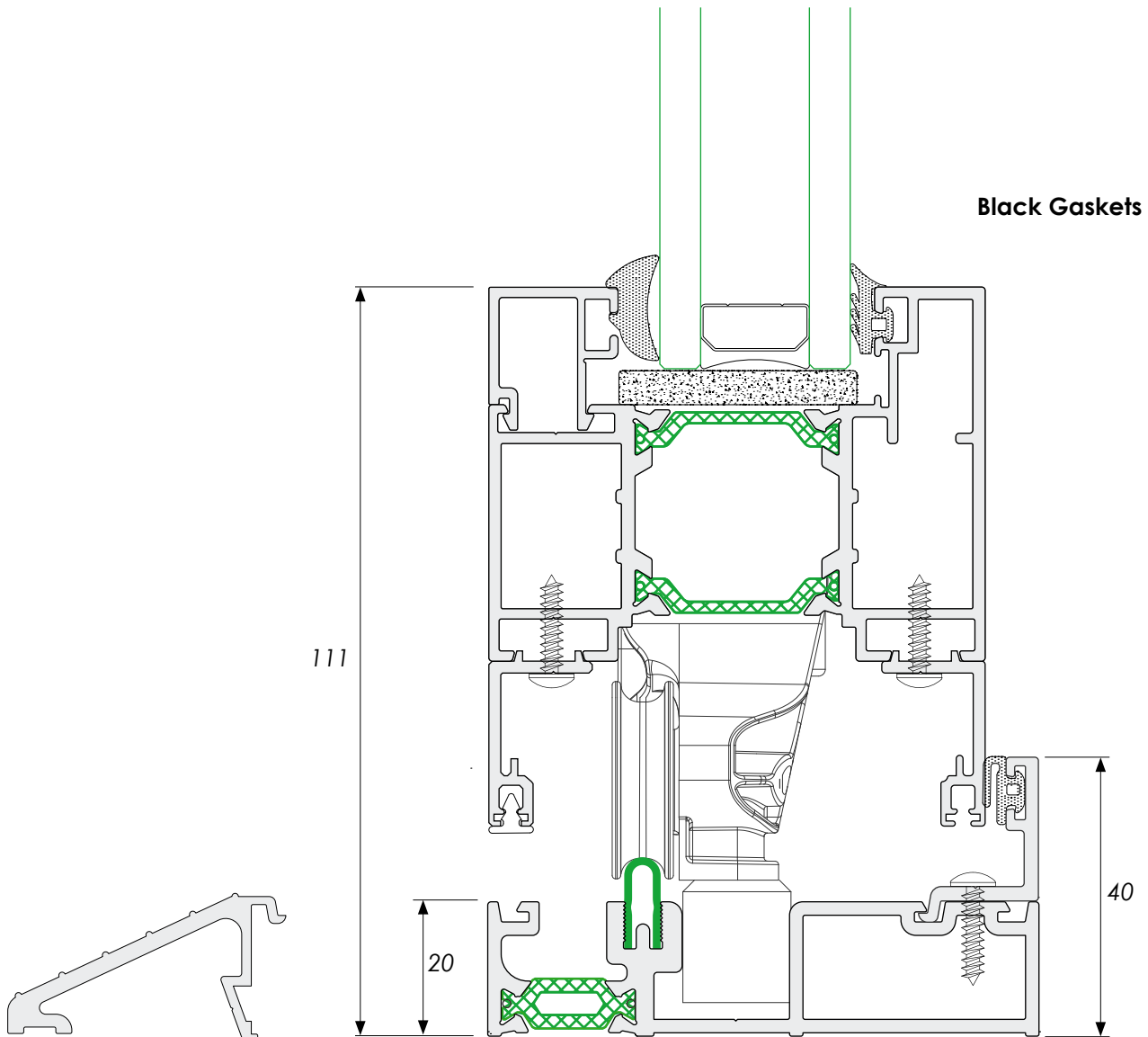
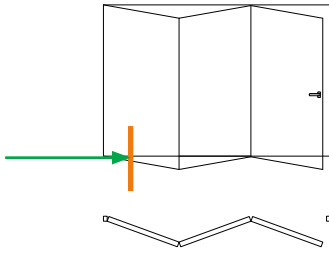


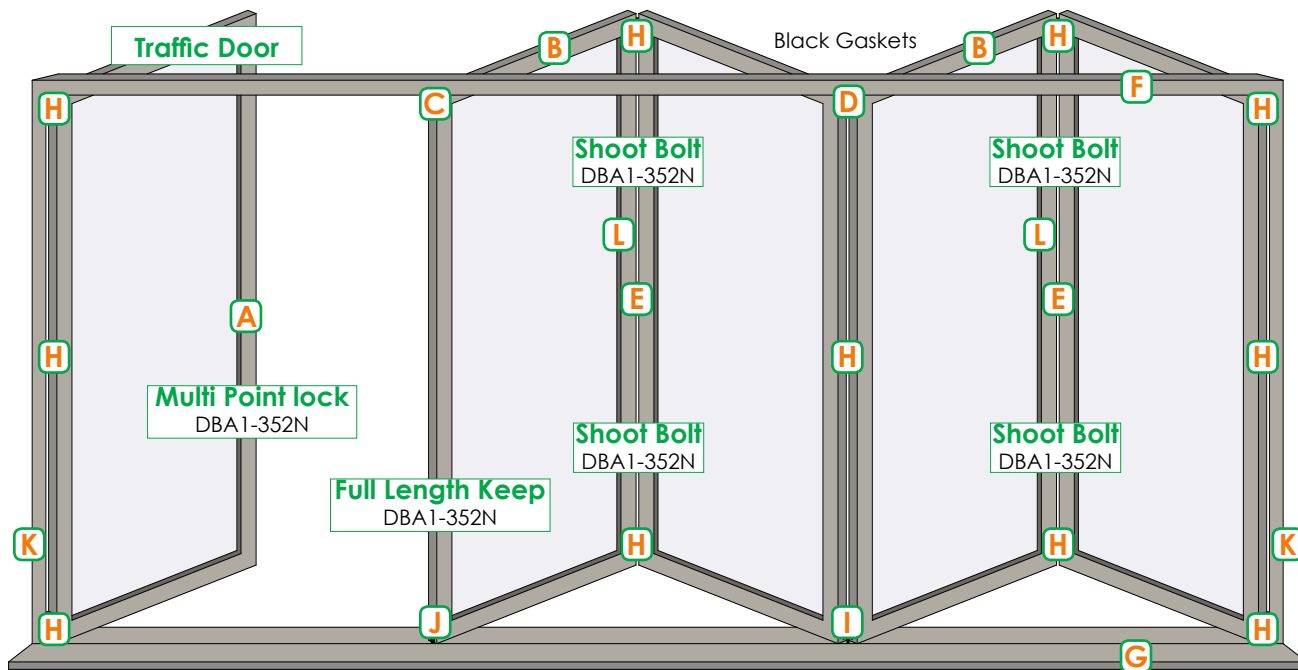
Low Threshold





Low Threshold with Rebate





**Cylinder**  
DB 1212



**Magnetic catch**  
Optional



**Top Half Guide**  
DBA1-358 (L/R)

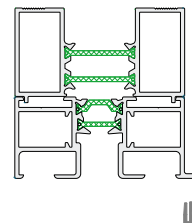
**Traffic Handle**  
DBHP-01



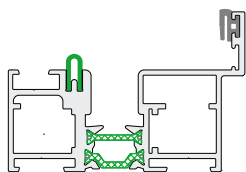
**Standard Top Guide**  
DBA1-352N



**Pull Handle Hinge**  
DBA1-355/6



**Head with Optional Trickle Vent**  
DBE-002 DBE-203



**Thresholds / Cill**



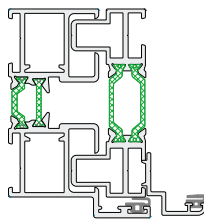
**Hinge**  
DBA-350



**Standard Bottom Roller**  
DBA1-351N



**Half Bottom Roller**  
DBA1-357 (L/R)



**Outer frame with Adjustable Jamb**  
DBE-002 DBE-201

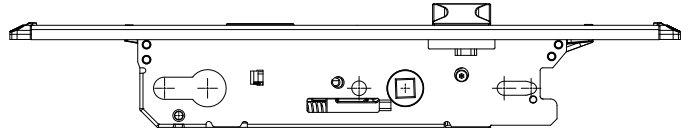


**Vivo Handle**  
DBHL-06  
**Vivo Handle Escutcheon**  
Optional DBHL-05

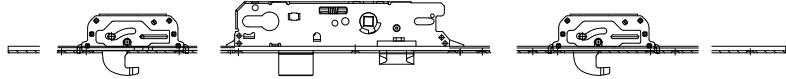




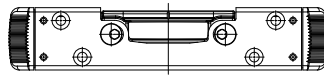
Mortice Lock-DBLK-56



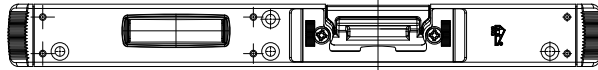
Multi Point Lock-DBLK-57



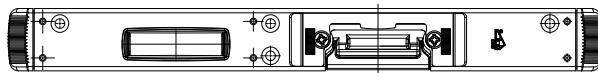
Hook Keep-DBLK-58



Latch Keep LH-DBLK-58/LH



Latch Keep LH-DBLK-58/RH



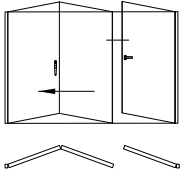




### Sash height under 2100mm

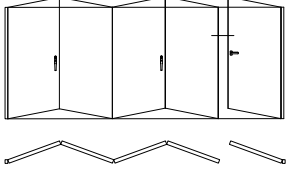
Typical configurations

3-2-1

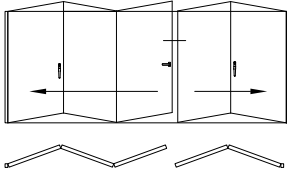


Lock spindle C/L - 1050 mm

5-4-1



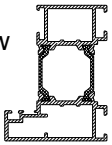
5-3-2



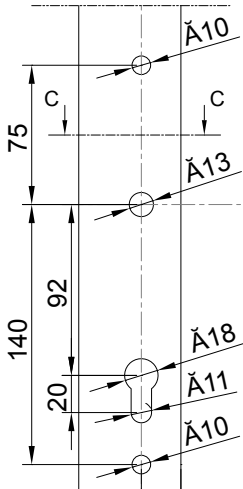
Other configurations:

- 7-6-1; 7-5-2;
- 7-3-4;
- 9-7-2; 9-6-3;
- 9-5-4;

View C-C



View B



For DBE-101  
21,3 mm  
For DBE-102  
30.0 mm

Trim to size if applicable



DBLK-50LH Lock

DBA1-358

A-A

16

115

592

16

226

132

94

115

1050

16

Hs > 2100 mm

B

C/L 1050 mm

1050

DBA1-357

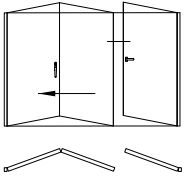




### Sash height over 2100mm

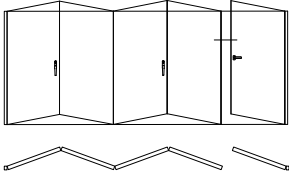
Typical configurations

3-2-1

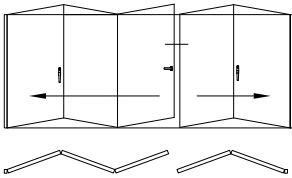


Lock spindle C/L - 1050 mm

5-4-1

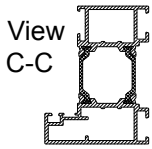


5-3-2

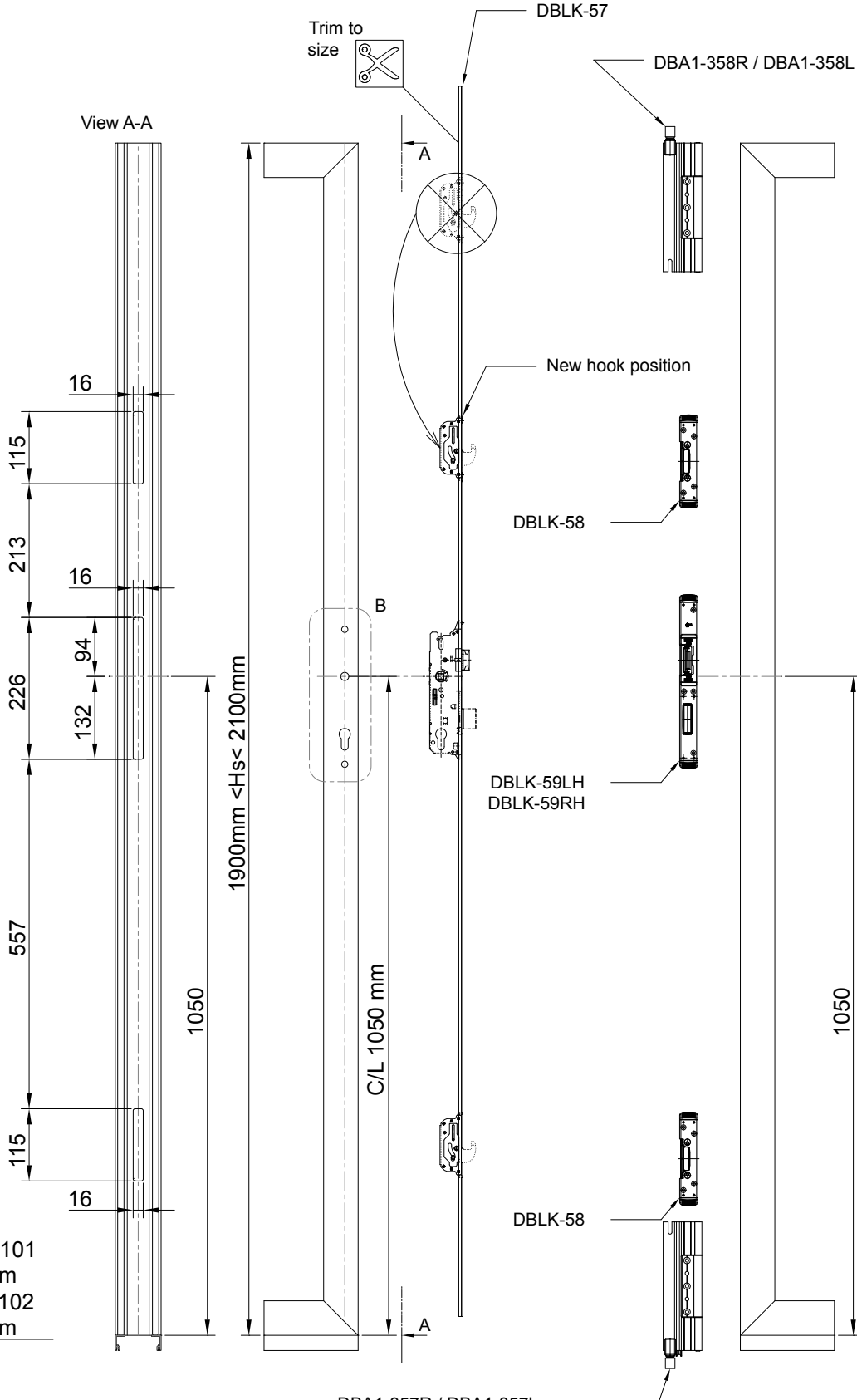
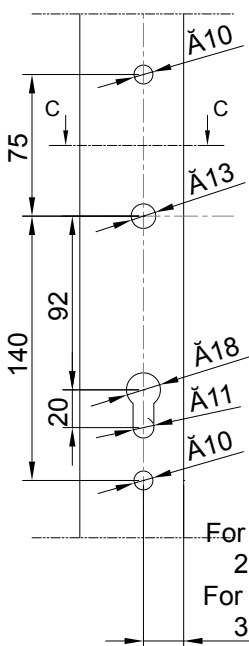


Other configurations:

- 7-6-1; 7-5-2;
- 7-3-4;
- 9-7-2; 9-6-3;
- 9-5-4;

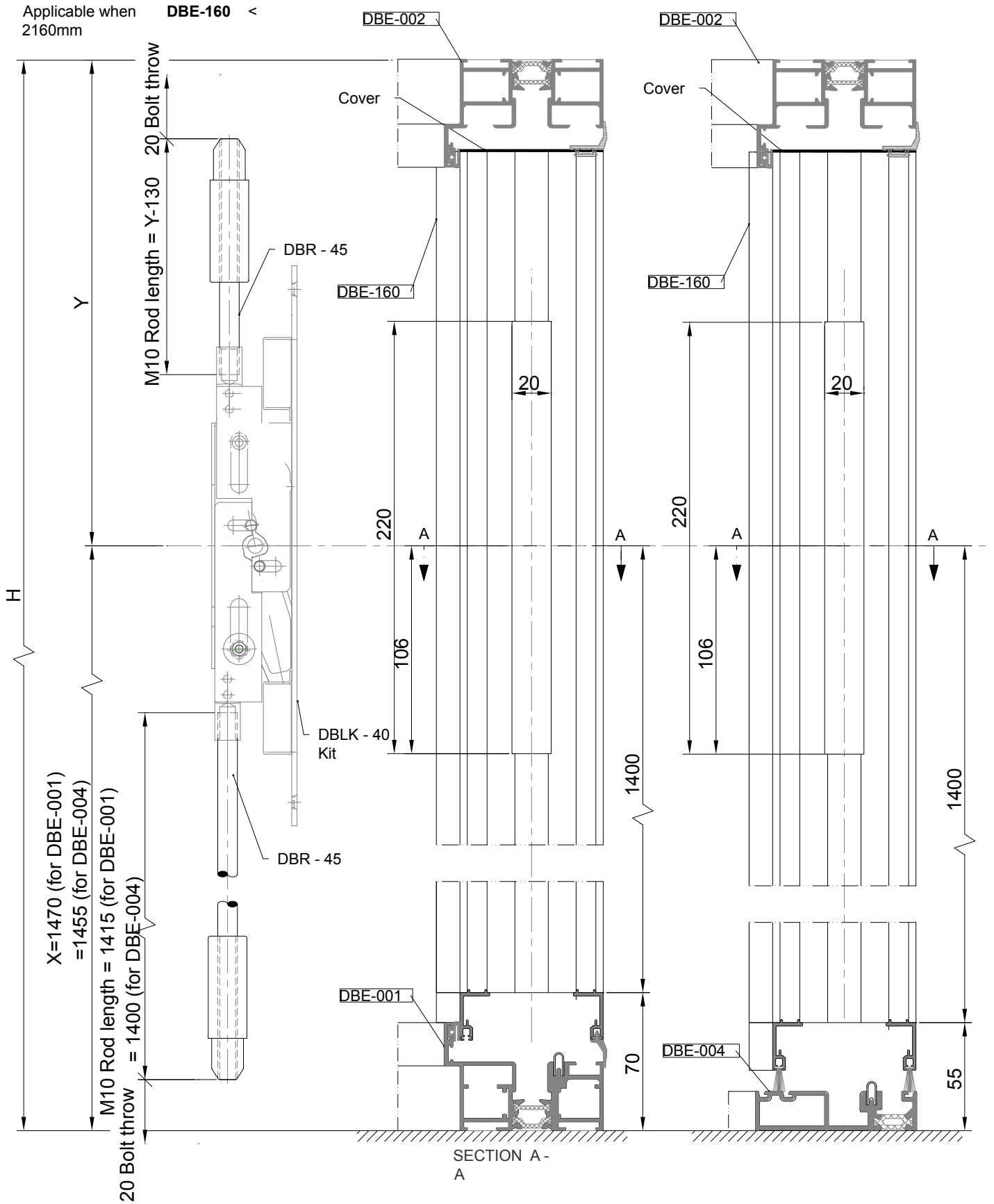


View B



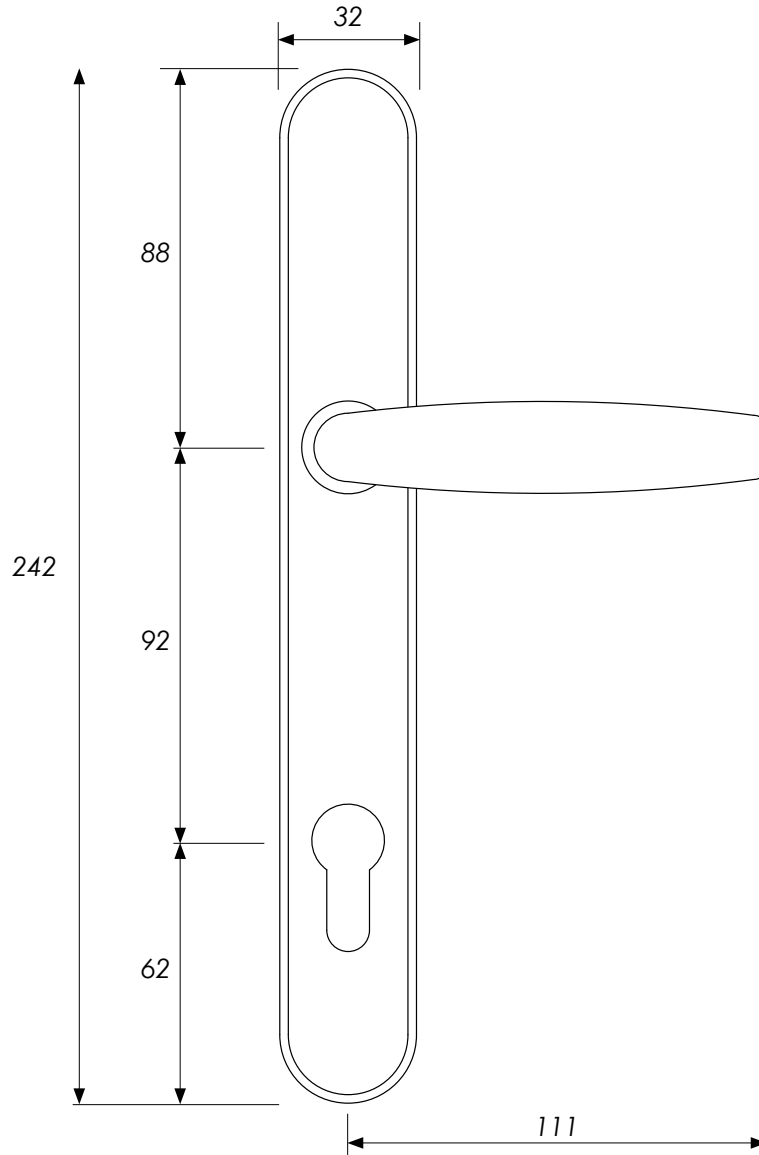
DBA1-357R / DBA1-357L





### Atlanta Traffic Handle

Cast aluminium levers. Aluminium backplate with stainless steel under construction. Fixing lugs fitted on both backplates for a secure fit. Supplied complete with spindles and screws



Black



Chrome



White



Satin Silver

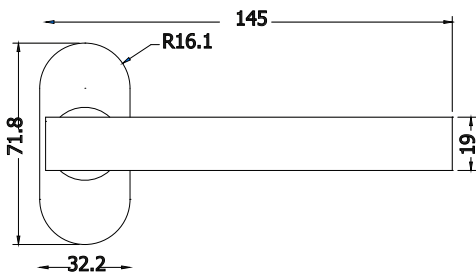


Grey

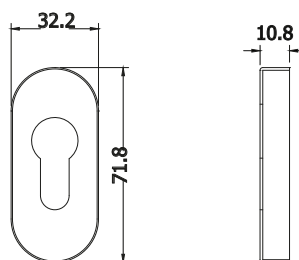
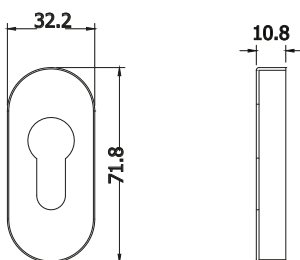
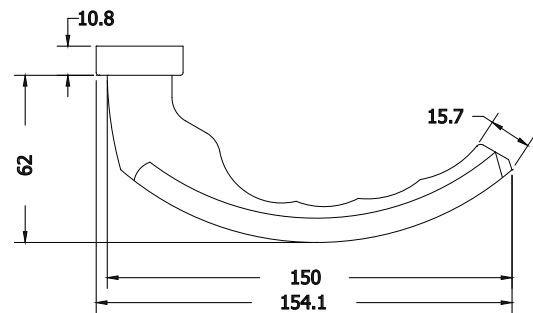
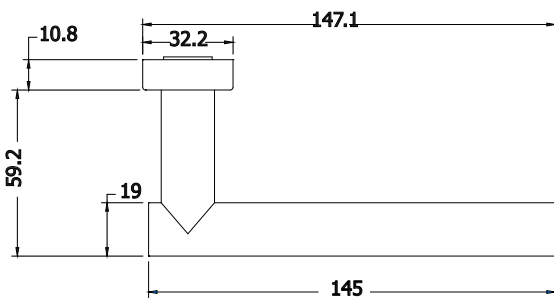
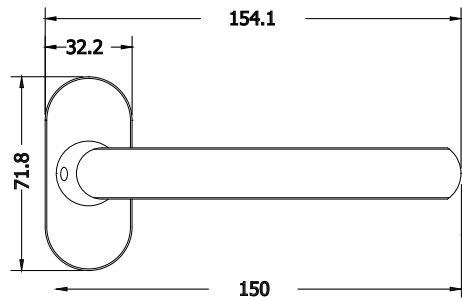
**Rose Handle**

- Solid, ergonomic lever on rose provides a modern, contemporary feel
- Fixings concealed behind clip-on oval rose
- Manufactured from 316 Marine Grade Stainless Steel
- Ideal for use where corrosion levels are high such as coastal

**Straight Handle**



**Curved Handle**



Vivo

Designed for intermediate locking panels on bi-fold doors. The handle end does not protrude outside its own width when turned, thus avoiding any damage to the opposite panel when stacked.

Comes colour matched to the traffic handle.

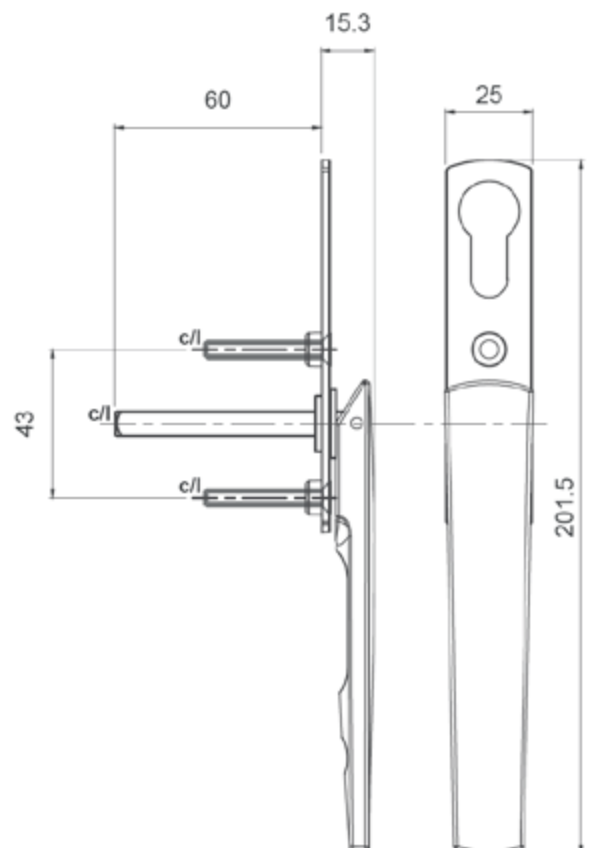
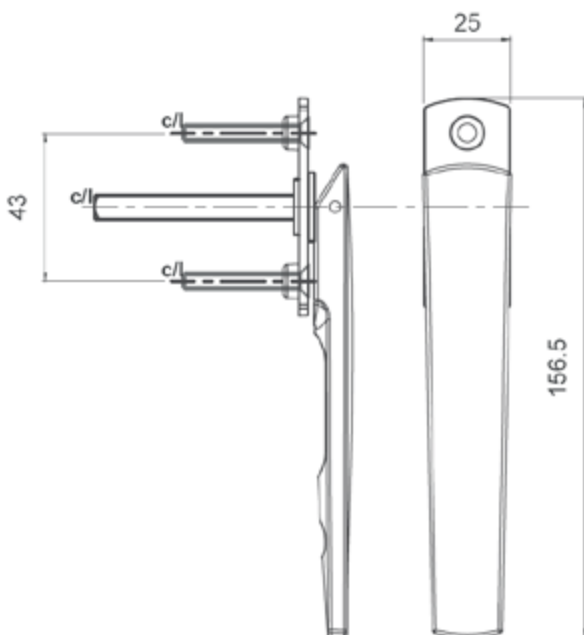
**Standard**

Vivo without Escutcheon



**Optional PAS24**

Vivo with Escutcheon





### 1 Star Cylinder

- The cylinder comes with a key fob which includes a serial number.
- Over 800,000 different key combinations.
- 6 Pins.
- Unrestricted keyway — easier for customers to get keys cut.
- Supplied with 3 keys

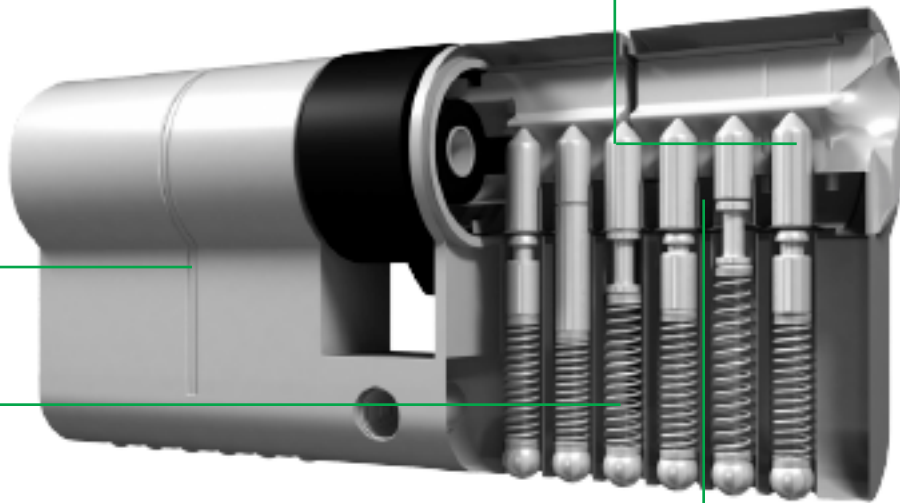


#### SACRIFICIAL CUT

The cylinder has a sacrificial cut on the each side, so when force is applied to either end, the cylinder will break away to the sacrificial cut line only, leaving the remaining cylinder operational and the locking mechanism intact.

#### ANTI PICK

Minimum of 3 anti-pick pins in each side of the cylinder makes it extremely difficult for a common burglar to pick the cylinder.



#### ANTI BUMP

The cylinder has a unique and patented anti-bump system which does not use trap pins. This system makes the turning of the cylinder key extra smooth.

#### ANTI DRILL

7 x hardened steel anti-drill pins are in each side of the cylinder. Plus all moving pins are nickel plated hardened steel 50 HRC minimum.



3 Star Kinetica Cylinder (Optional upgrade)

- The cylinder comes with a key fob which includes a serial number.
- Over 800,000 different key combinations.
- 6 Pins.
- Unrestricted keyway — easier for customers to get keys cut.
- Supplied with 5 keys

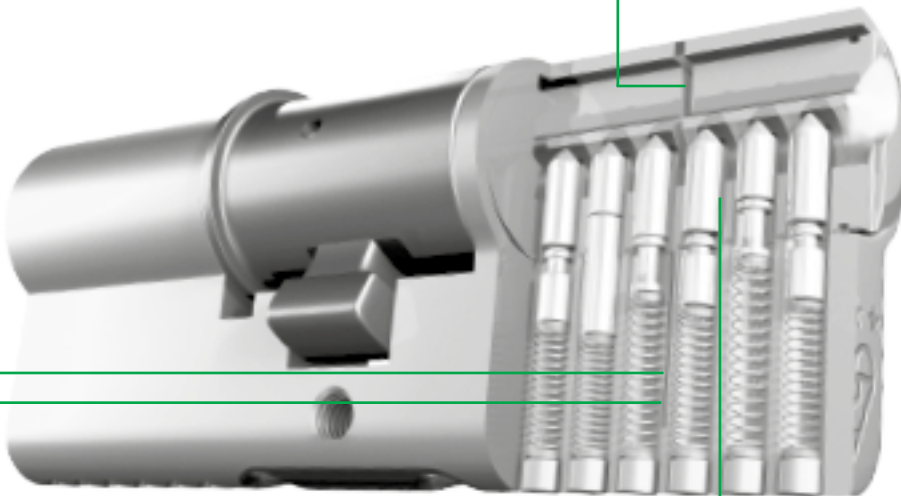


**ANTI BUMP**

The cylinder has a unique and patented anti-bump system which does not use trap pins. This system makes the turning of the cylinder key extra smooth.

**ANTI SNAP**

Patent applied for anti tilt mechanism. In normal anti snap cylinders once a cylinder is snapped at the outside end, the inner section is heavier and will tilt allowing the burglar a small gap to gain access to the bolt. But the Fullex anti tilt ring stops this happening.



**ANTI PICK**

Minimum of 3 anti-pick pins in each side of the cylinder makes it extremely difficult for a common burglar to pick the cylinder.

**ANTI DRILL**

7 x hardened steel anti-drill pins are in each side of the cylinder. Plus all moving pins are nickel plated hardened steel 50 HRC minimum.




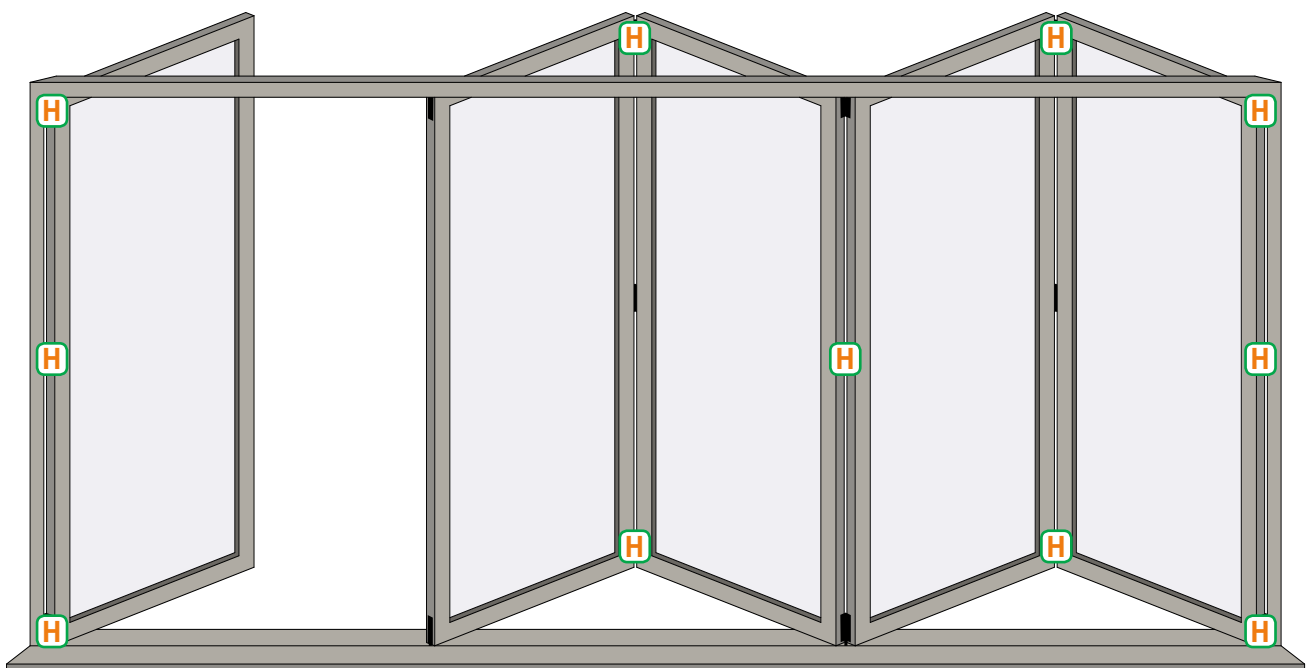


# Hinge

**Hinge**  
**DBA-350**  
Available in black



Fits in this position 





# Pull Handle Hinge

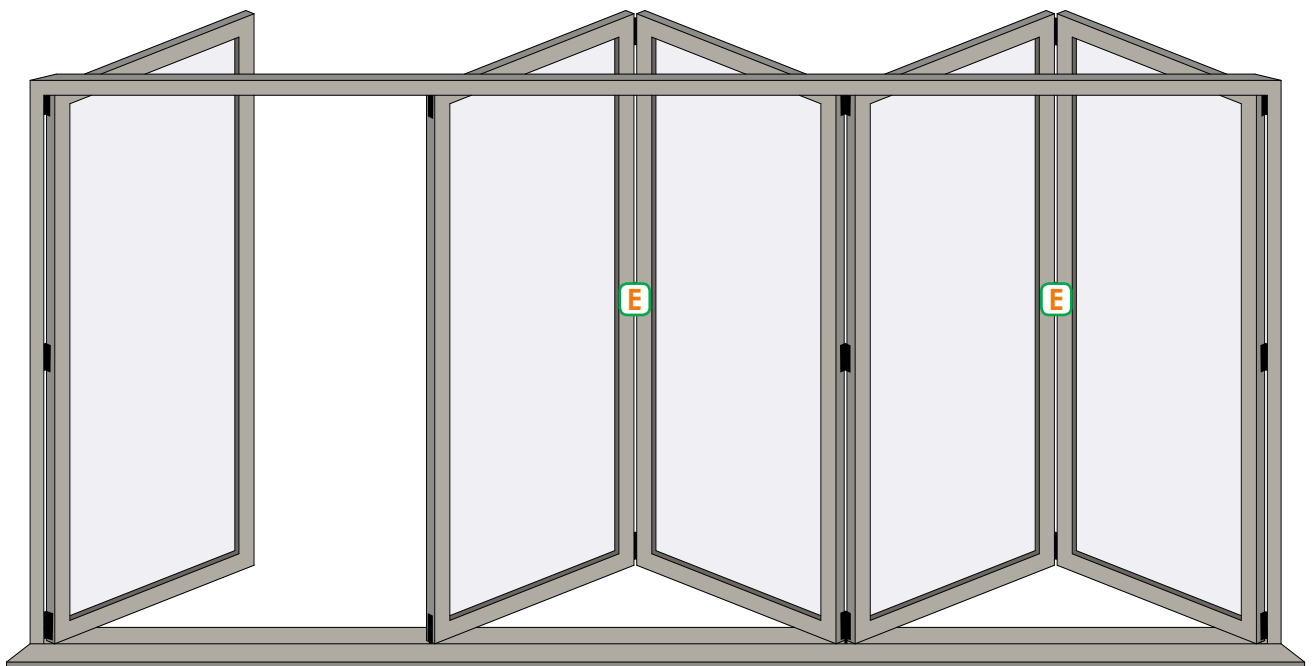
**Pull Handle (Open Out)**

**DBA1-355/6**

Available in black



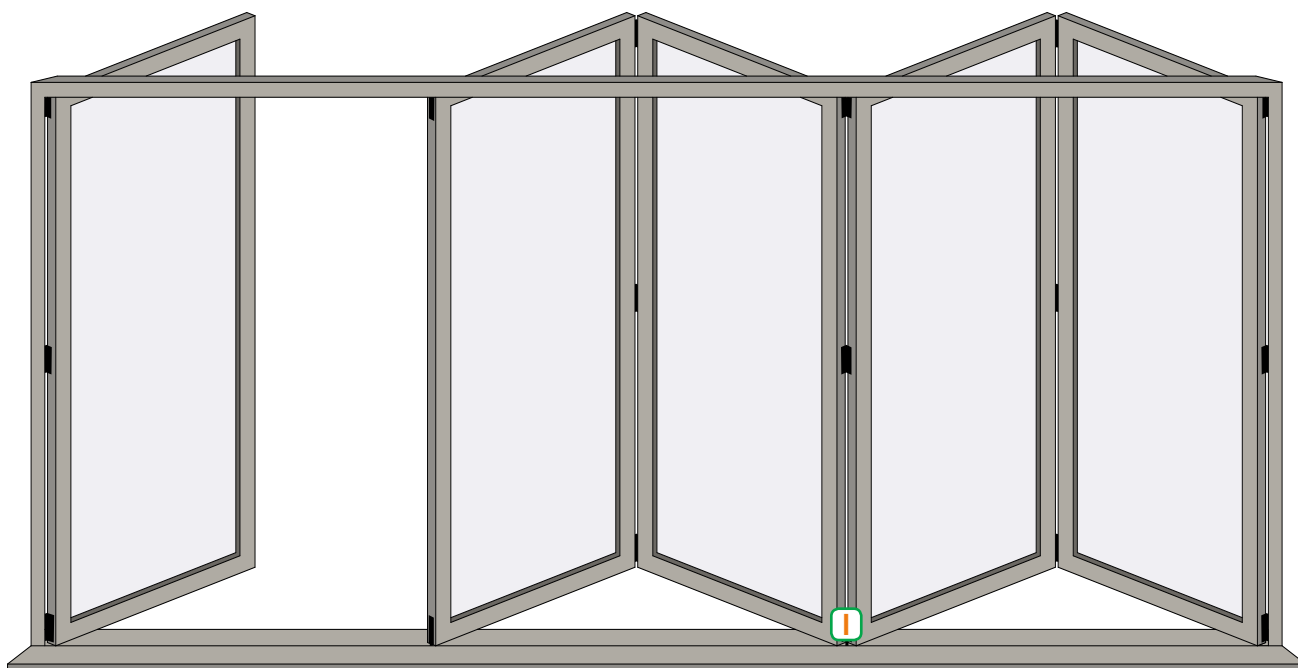
Fits in this position



Standard Bottom Roller  
DBA1-351N  
Available in black



Fits in this position 



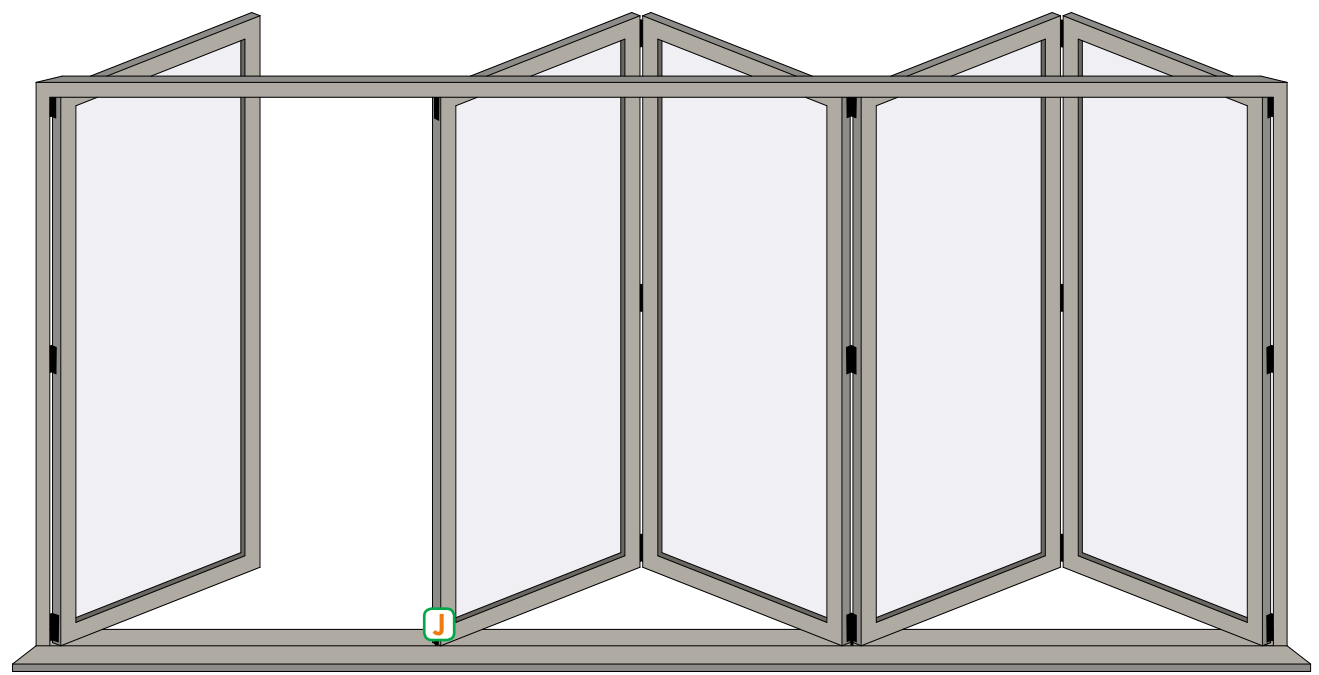


# Half Bottom Roller

Half Bottom Roller  
DBA1-357 (L/R)  
Available in black



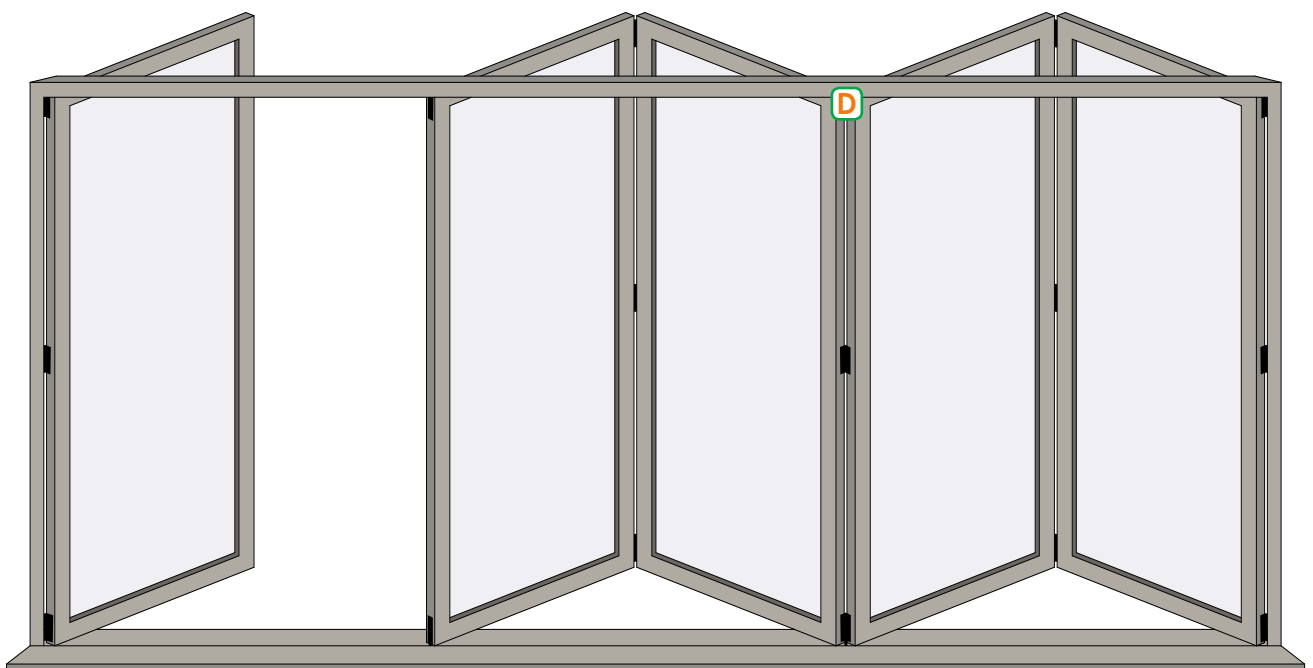
Fits in this position **J**



Standard Top Guide  
DBA1-352N  
Available in black




Fits in this position **D**

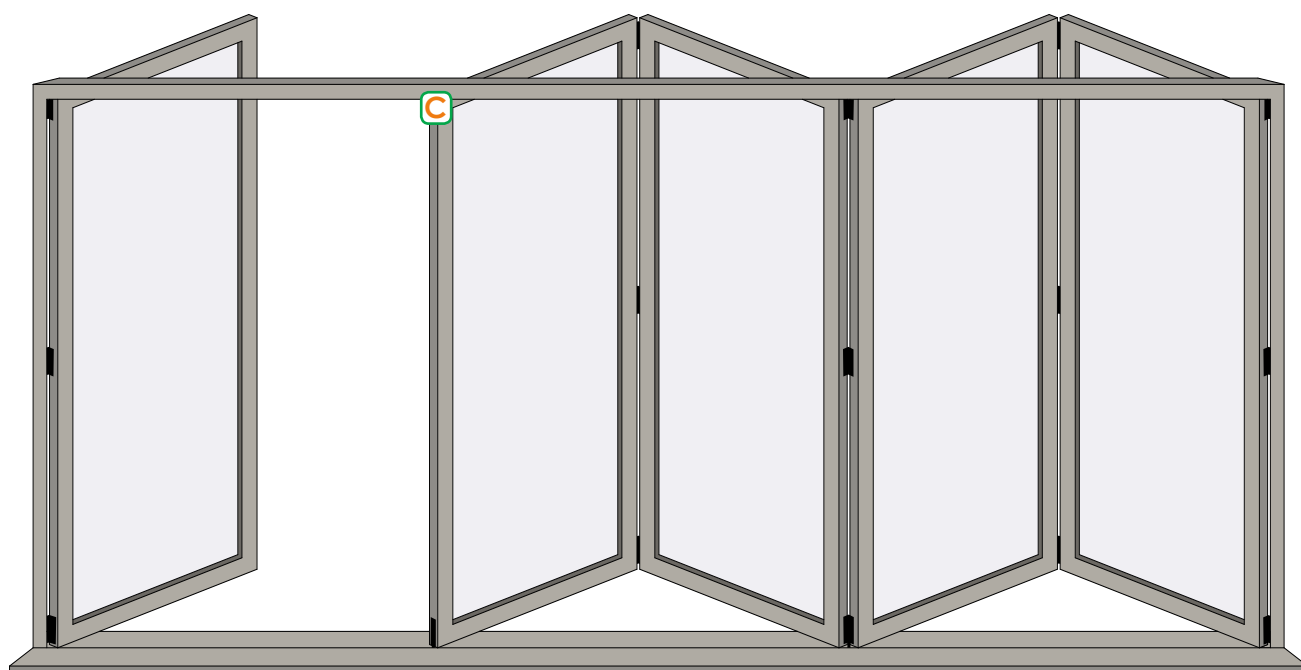




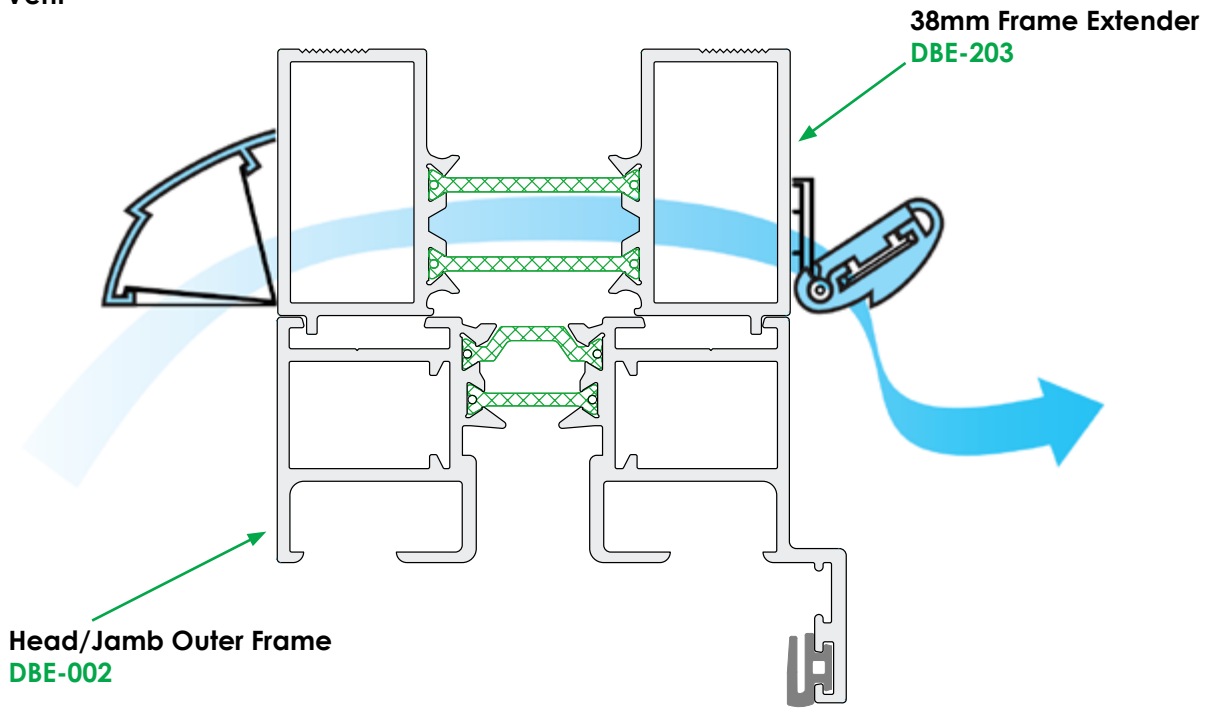
Half Top Guide  
DBA1-358 (L/R)  
Available in black



Fits in this position 



Trickle Vent



- Smallest 5000mm<sup>2</sup> equivalent area vent on the market – just 410mm long.
- Suitable for use where a high level of equivalent area is required and to achieve the minimum room requirements under Building Regulations (min 5000mm<sup>2</sup> ea per room).
- Manufactured from aluminium alloy.
- Excellent air tightness performance, increasingly important with dwelling air pressure tests.
- Aesthetically pleasing design – unobtrusive when installed.

Performance

BS EN 1026: 2000 Air Permeability

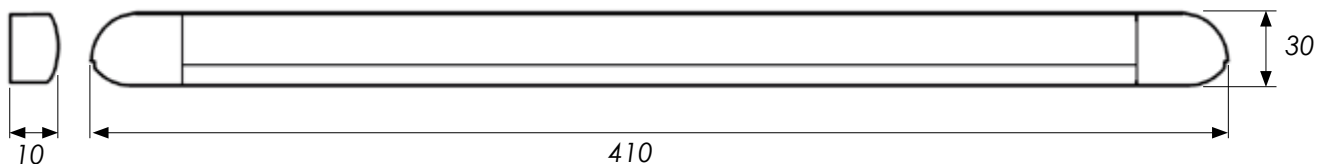
Window vent	@ 50Pa (m <sup>2</sup> /hr)	@ 50Pa (l/s)
5000EA	0.61	0.17

BS EN 1027: 2000 Watertightness

Window vent	Pressure at no leakage (Pa)	Classification
5000EA	900	E900

BS EN ISO 717-1: 1997 Airborne Sound Insulation (dB)

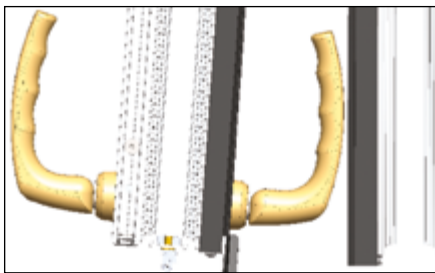
Window vent	Dn,e,w (dB) Open
5000EA	33



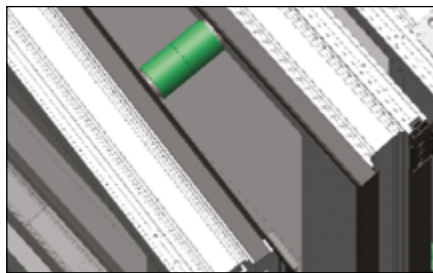
Magnetic catch installation positioning



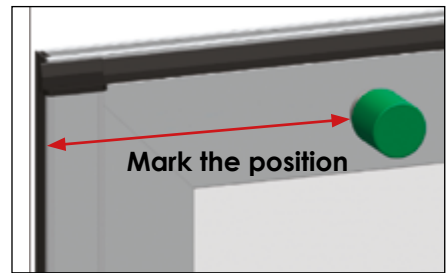
Position the swing door at the point where it will stop.  
 Ensure some clearance between the lever handle and next door.  
 Use fully assembled panel catch pair to locate the position between two doors.  
 Position the catch on swinging door first.



Position the door



Position the assembled panel catch

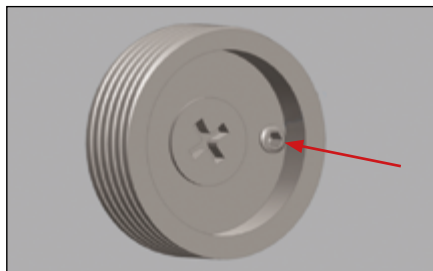


Mark the position with pencil

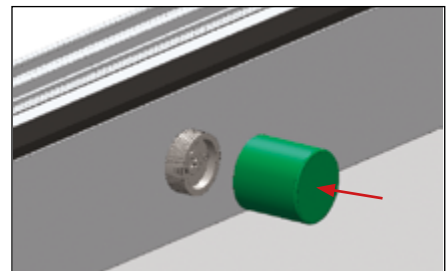
Unscrew panel catch back plate and fix it with choice of fixings provided in the box.  
 Ensure the position for anti-rotation screw is pointed towards the hinge side.  
 Secure the 3mm pointed anti rotation grub screw.  
 Screw the outer sleeve.



Attach with fixing



Secure with 3mm grub screw



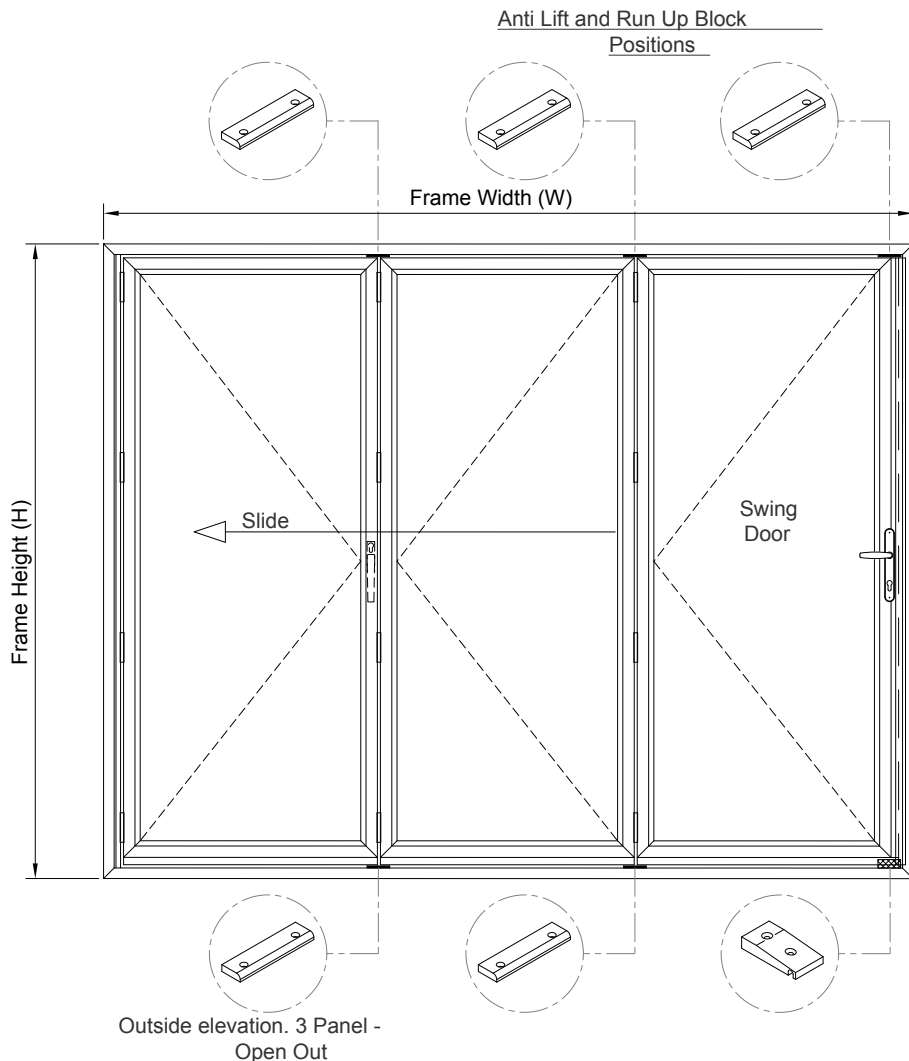
Screw on outer sleeve

Mark the perfect position for panel catch on the opposite panel.  
 Ensure anti rotation screw is pointed to the nearest swinging door hinge.  
 Fix the second panel catch by repeating the steps.

Use **60mm magnetic** catch where there is a Traffic handle.  
 Use **26mm magnetic** catch where there is a Vivo handle.



To upgrade to a PAS24, a 3 star cylinder and a vivo with escutcheon must be fitted. Anti lift and run up blocks must also be fitted.

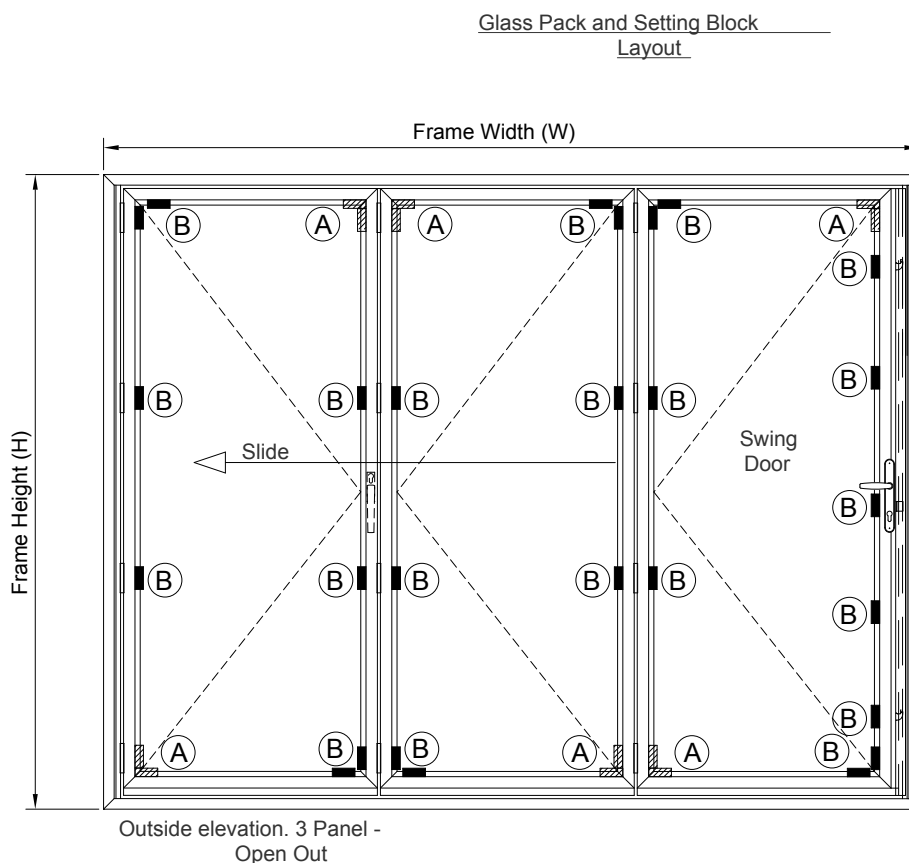


To reduce access gaps between outer frame and sash use:

- 1) DBA1-205 Anti lift blocks at top and bottom as shown.



- 2) DBA1-204 Run Up block at the bottom as shown.



A - 'Shaded' locations are 'toe and heel' packers between aluminium frame and glass.

- 1) Diagonally across each leaf.
- 2) For adjustment of door to 'square' for set up.



B- Solid filled locations are support packers between aluminium frame and DGU.

- 1) At all hinge and lock points.
- 2) At top and bottom of DGU to prevent slippage.

# Configuration Table - max + min's

The above sizes are for guidance only and are dependent upon configuration and glass specification.  
Standard glass specification is 28mm Thickness 2 x 4mm toughened glass

KEY:  **Narrow Door Width**       **Optimum Door Width**       **Wide Door Width**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Panel	2 Panels	3 Panels	4 Panels	5 Panels	6 Panels	7 Panels	8 Panels	9 Panels	10 Panels	11 Panels	12 Panels	13 Panels	14 Panels
0.6m	Optimum													
1.2m	Wide	Narrow												
1.8m		Optimum												
2.4m		Wide	Narrow											
3.0m			Optimum											
3.6m			Wide	Narrow										
4.2m				Optimum										
4.8m				Wide	Narrow									
5.4m					Optimum									
6.0m					Wide	Narrow								
6.6m						Optimum								
7.2m						Wide	Narrow							
7.8m							Optimum							
8.4m							Wide	Narrow						
9.0m								Optimum						
9.6m								Wide	Narrow					
10.2m									Optimum					
10.8m									Wide	Narrow				
11.4m										Optimum				
12.0m										Wide	Narrow			
12.6m											Optimum			
13.2m											Wide	Narrow		
13.8m												Optimum		
14.4m												Wide	Narrow	
15.0m													Optimum	
15.6m													Wide	Narrow
16.2m														Optimum
16.8m														Wide

ASSEMBLED

KIT FORM

		Width	Height	Max weight per door
Configuration with even groups of doors without Traffic door.	Min	750	1900	120 kg
	Max	1200	3000	
Configuration with Traffic door.	Min	750	1900	
	Max	1200	3000	



### **Air Permeability Rating:**

**Class 4 – 600 Pascals** (approximately 112kph/70 mph) – the equivalent of over 60Kg (61.18) per m<sup>2</sup>

A calibrated air pressure is applied to the doors to see what pressure they withstand before leaking air. This pressure is measured in Pascals so the door could achieve anything from 50 Pascals which would be very poor (Class 1), up to 600 Pascals (Class 4) which is the best.

### **Water Tightness:**

**Class 9A – 900 Pascals** (approximately 137kph/85mph)

A similar test to the above but air-water pressure is applied to the doors to see how much they withstand before leaking water. Again this goes from 50 Pascals (Class 1) up to 900 Pascals (Class 9).

## Powder Coated Finish

### **Qualicoat Powder Coated Finish**

Coating thickness ISO 2360

The thickness of the organic coating on each part to be tested shall be measured on the significant surface at not less than five measuring areas (appr.1 cm<sup>2</sup>).

REQUIREMENTS: Powder coating 3 :

Class 1 : 60 µm  
Class 1.5 60 µm  
Class 2 : 60 µm  
Class 3 : 50 µm

Two-coat powder coating (classes 1 and 2) : 110 µm  
Two-coat PVDF powder coating : 80 µm

Two preliminary pretreatments are defined: a) Standard pretreatment (compulsory) The total etching degree shall be at least 1.0 g/m<sup>2</sup>. b) Enhanced pretreatment (for SEASIDE endorsement) This pre-treatment includes degreasing either in an independent step or in a combined degreasing/etching step.

The total etching degree shall be at least 2.0 g/m<sup>2</sup>. For type AA (dual etching) the two final steps shall be at least 0.5 g/m<sup>2</sup>.

Coating applicators who wish to have the endorsement SEASIDE on their licence certificate shall apply to their General Licensee or directly to QUALICOAT in countries without a General Licensee.

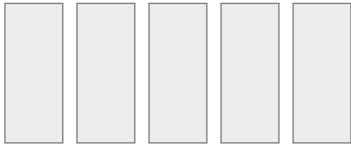
- **The powder coated finish is suitable for coastal locations.** The postcode of the installation site must be supplied on the order form to obtain a specific warranty.

The three numbers in the code stand for:

### First

#### Number

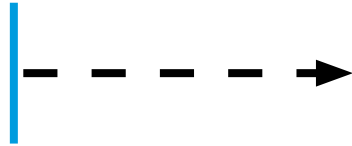
Overall number of panels.



### Second

#### Number

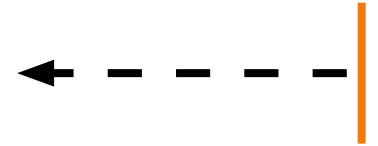
Number of panels hinged from the left.



### Third

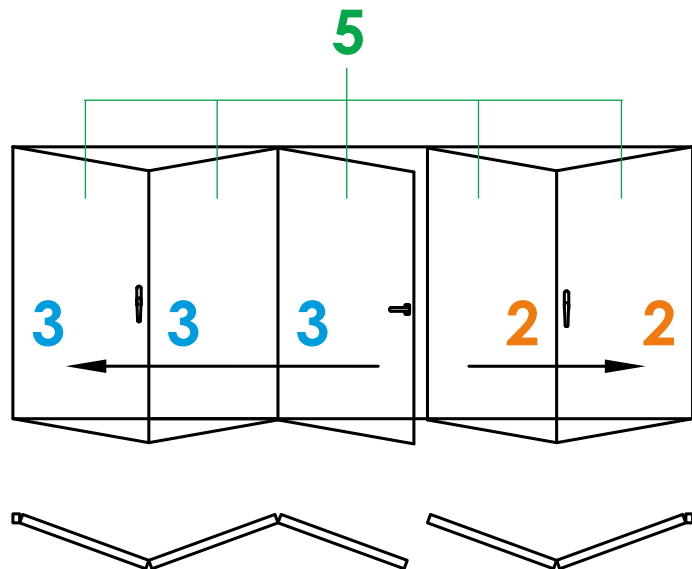
#### Number

Number of panels hinged from the right.



Example: **532**

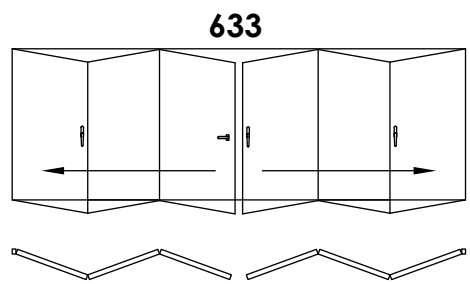
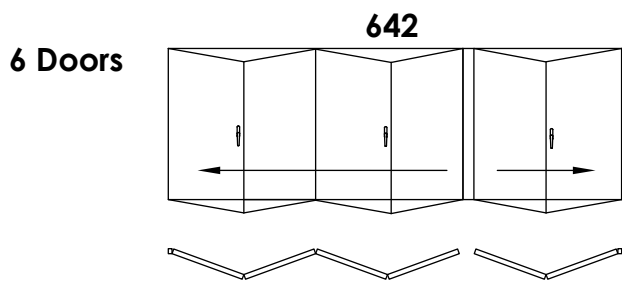
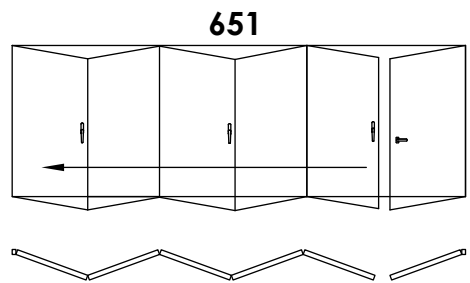
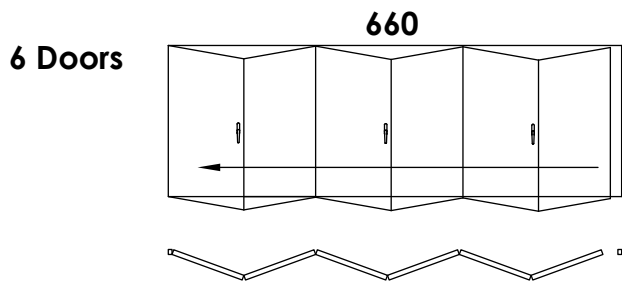
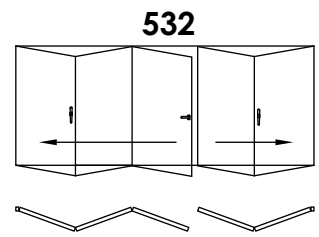
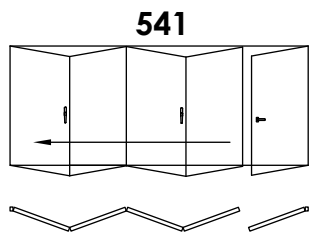
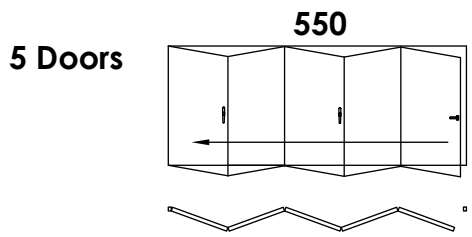
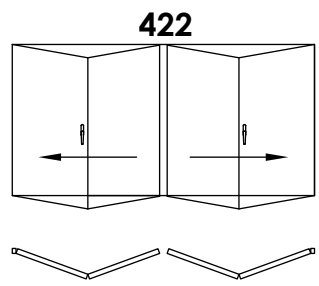
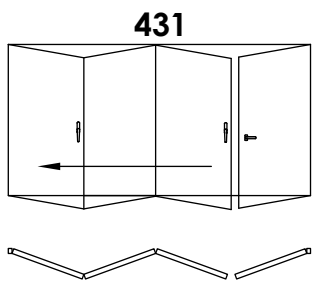
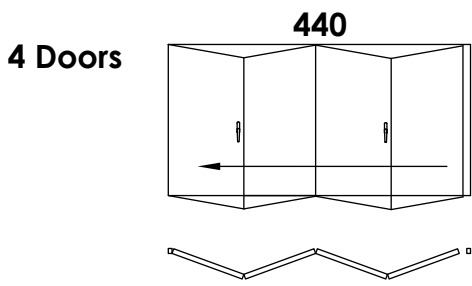
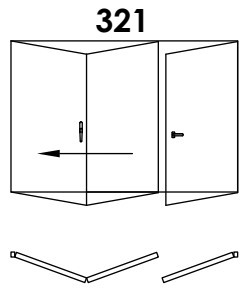
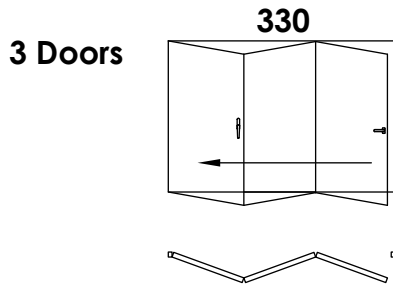
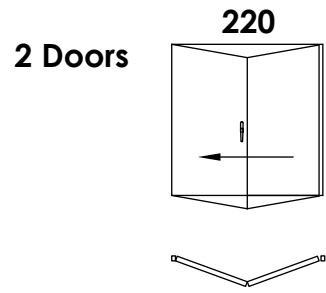
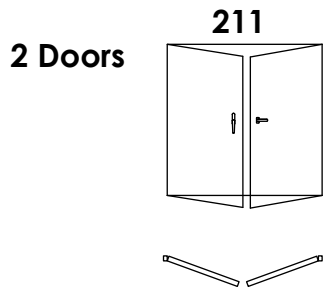
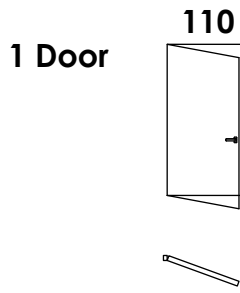
- 5** panels in total
- 3** from the left
- 2** from the right.



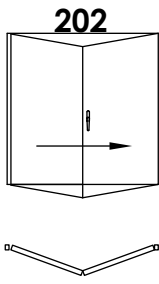
This is a 532 viewed from outside opens out.



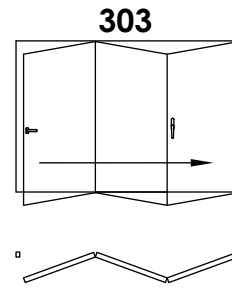
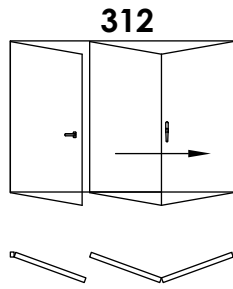
Open OUT



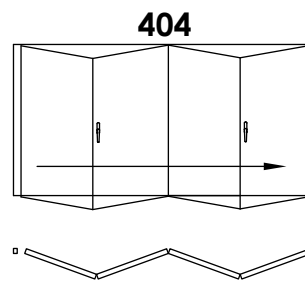
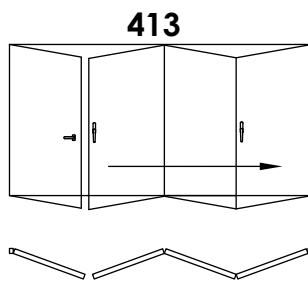
Open OUT



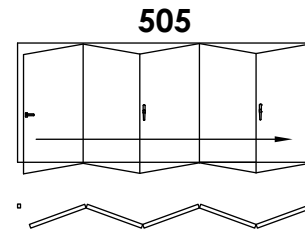
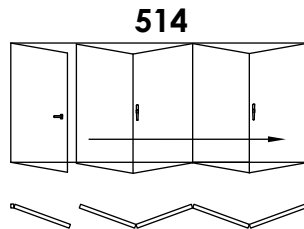
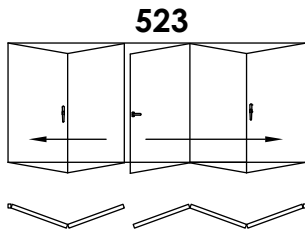
1 Door



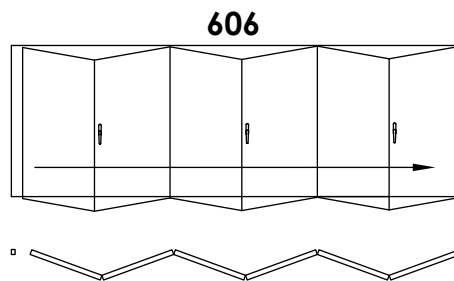
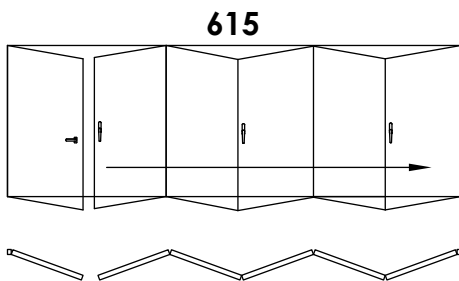
3 Doors



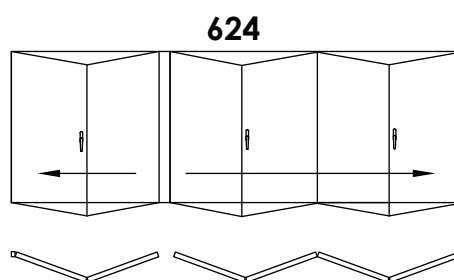
4 Doors



5 Doors

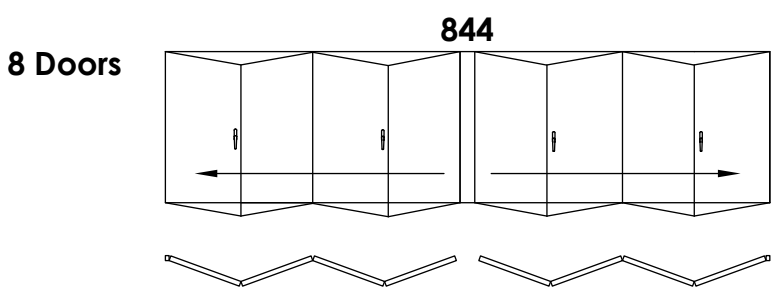
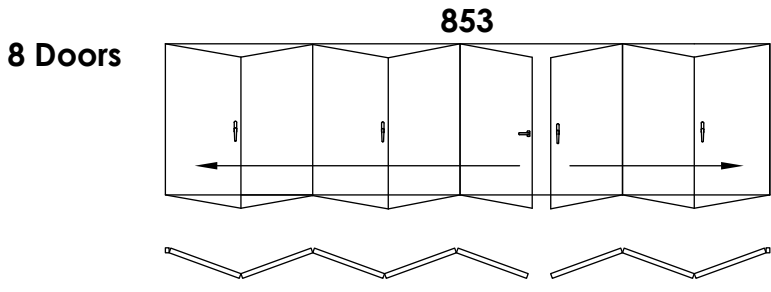
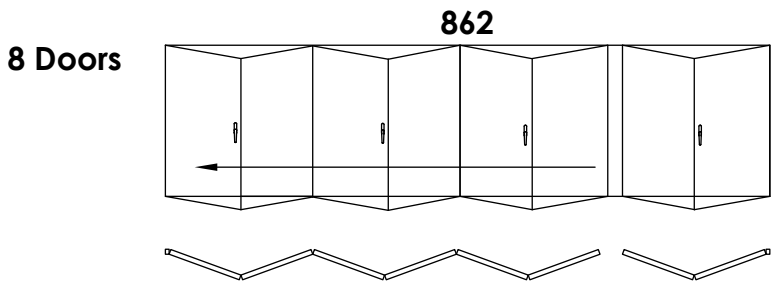
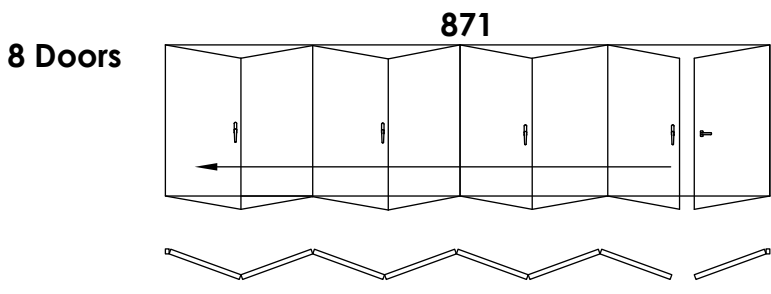
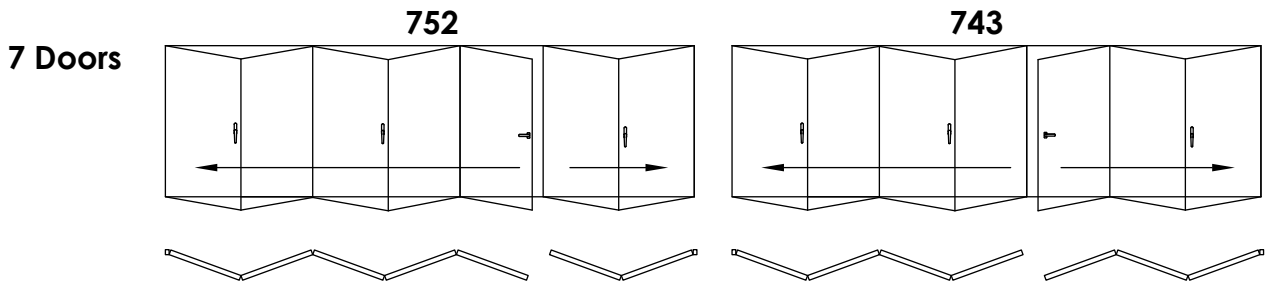
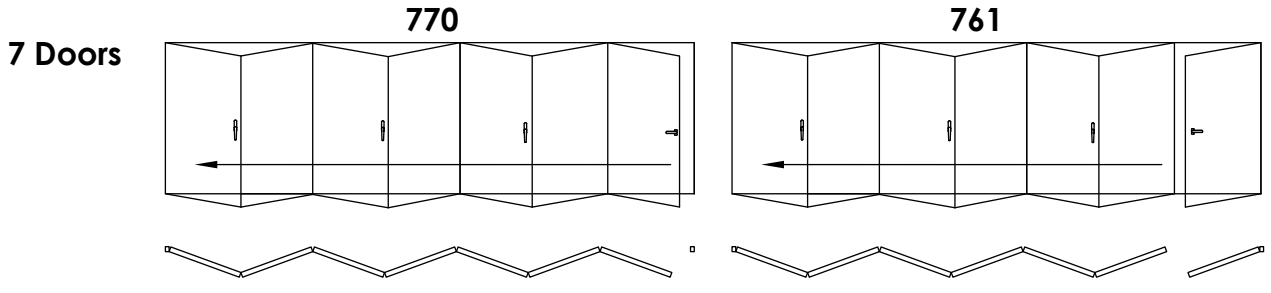


6 Doors

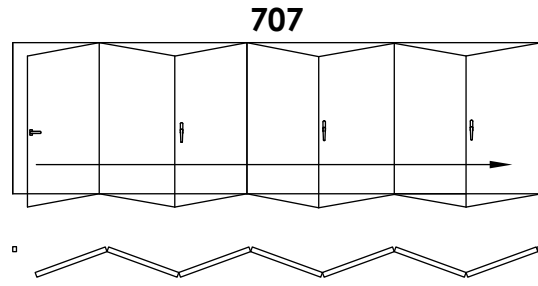
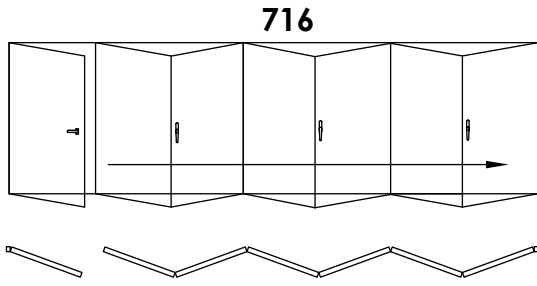


6 Doors

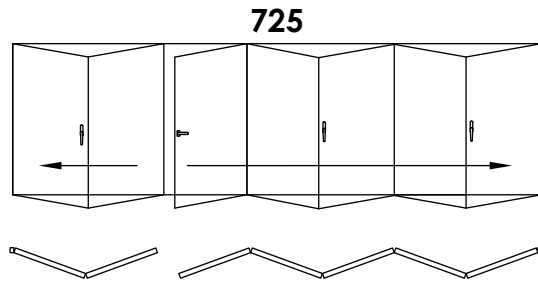
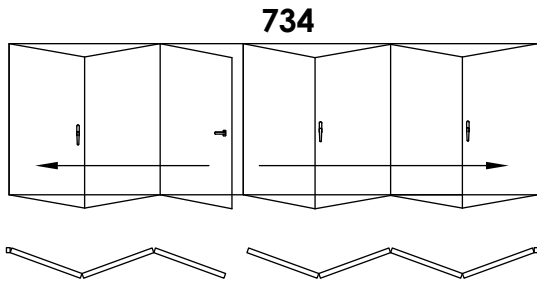
Open OUT



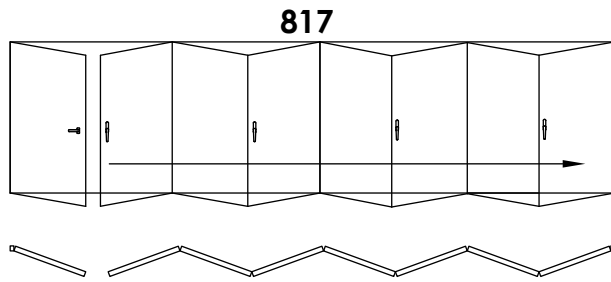
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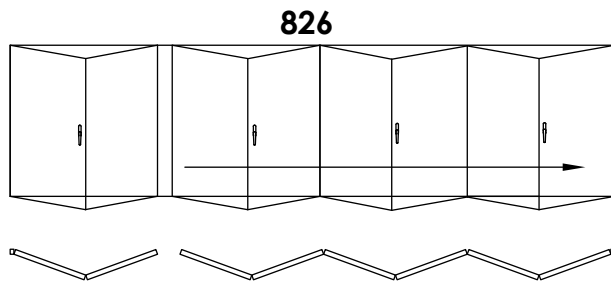
7 Doors



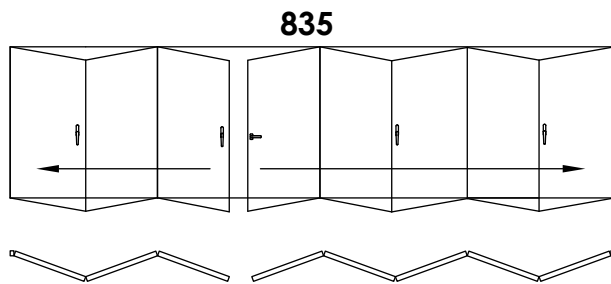
7 Doors



8 Doors



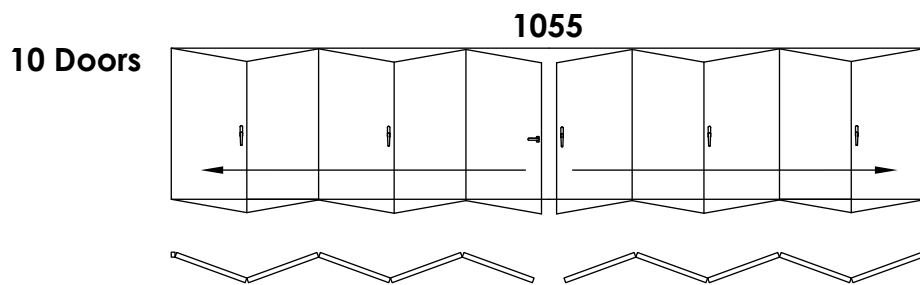
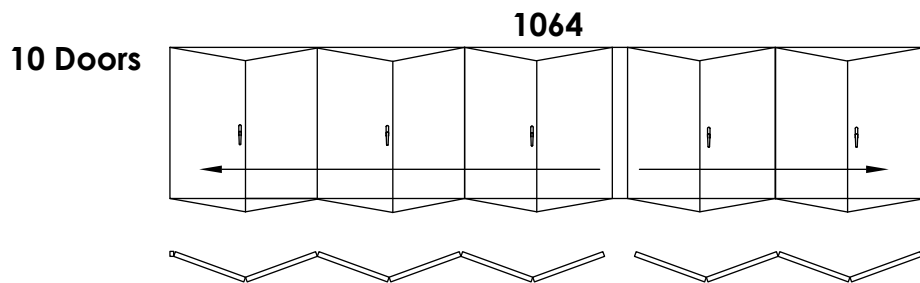
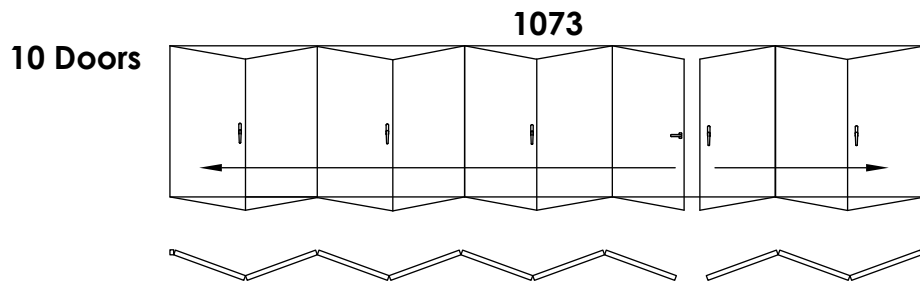
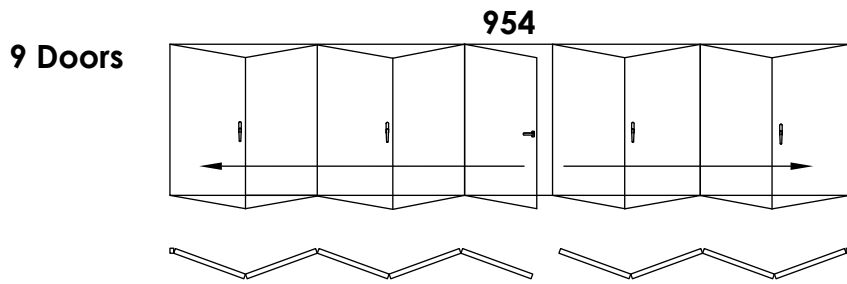
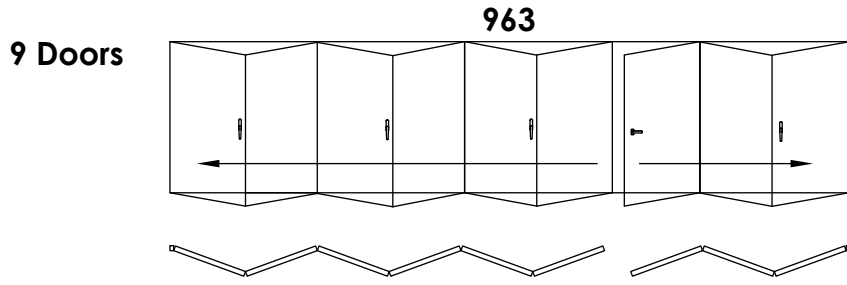
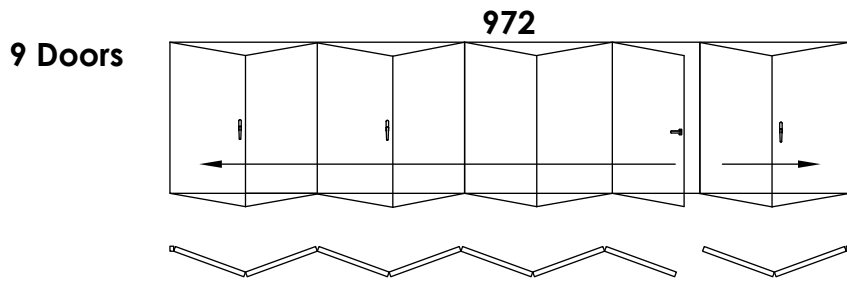
8 Doors



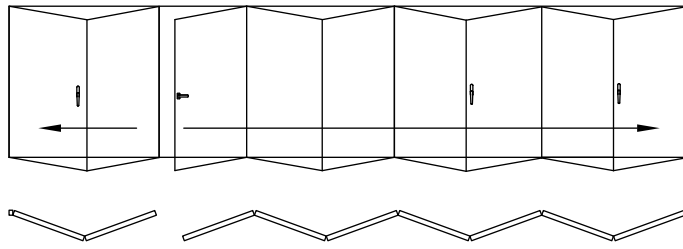
8 Doors



Open OUT

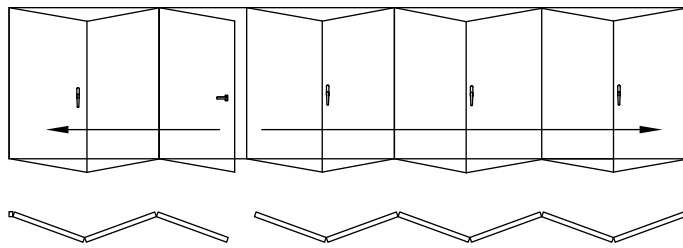


927



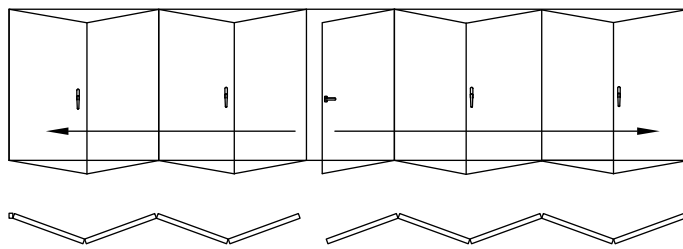
9 Doors

936



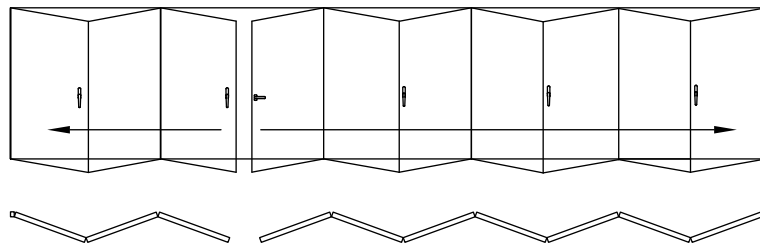
9 Doors

945



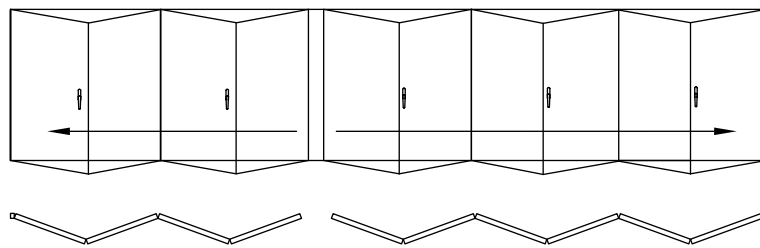
9 Doors

1037

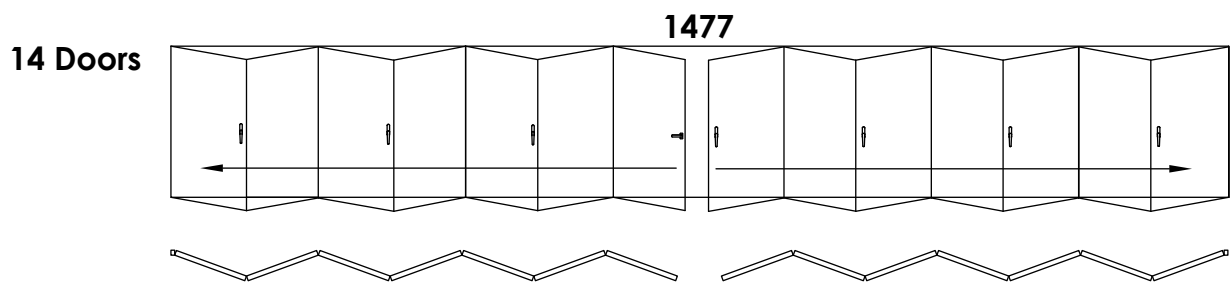
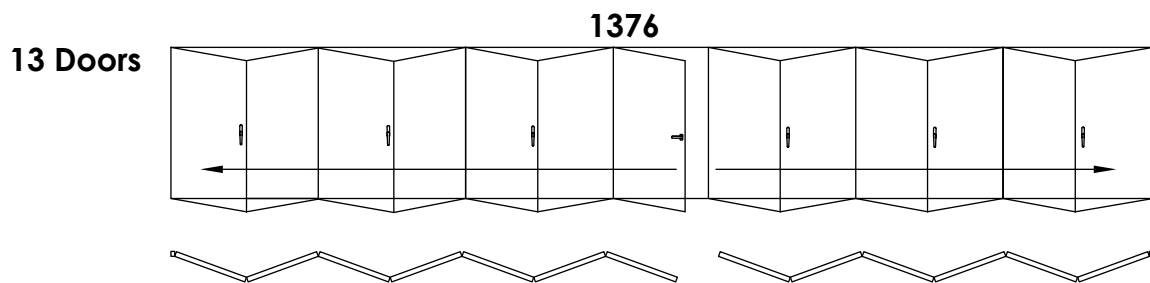
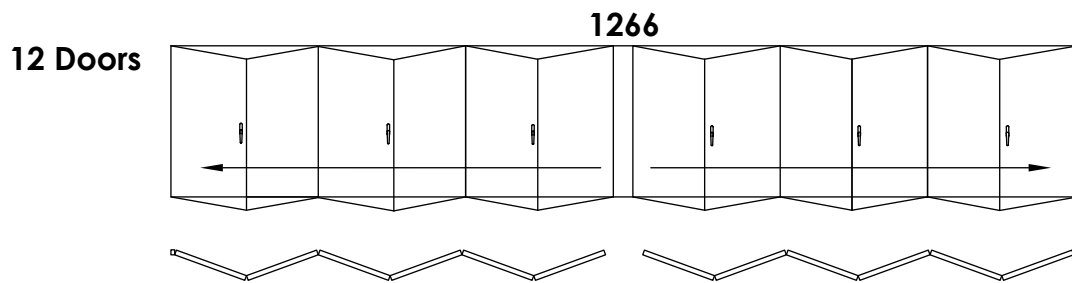
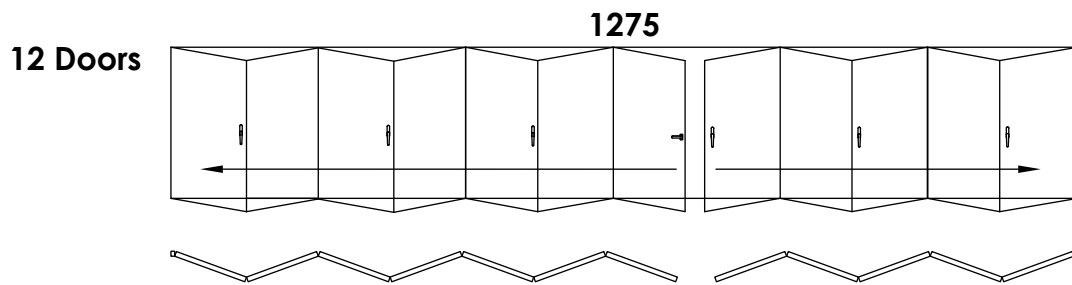
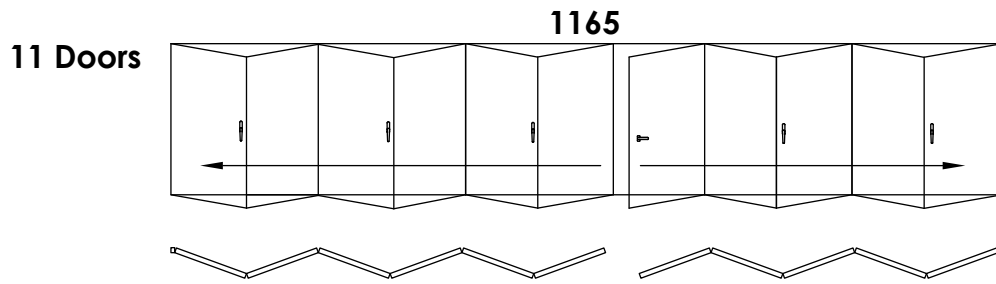
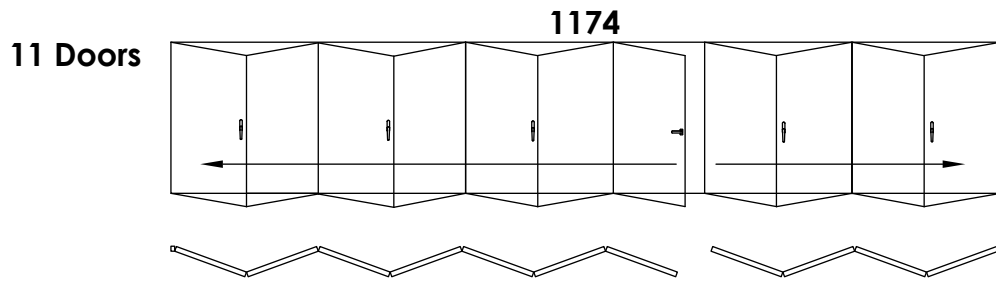


10 Doors

1046

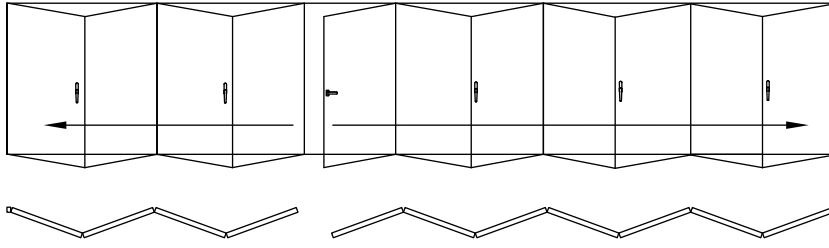


10 Doors



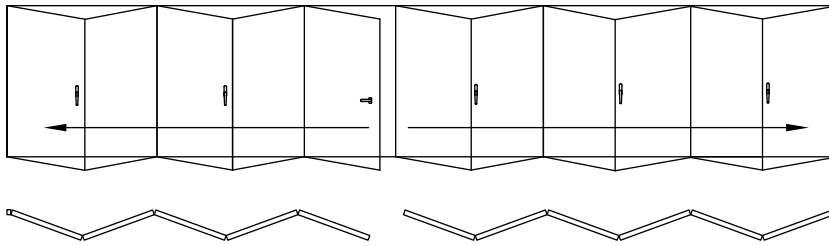
Open OUT

1147



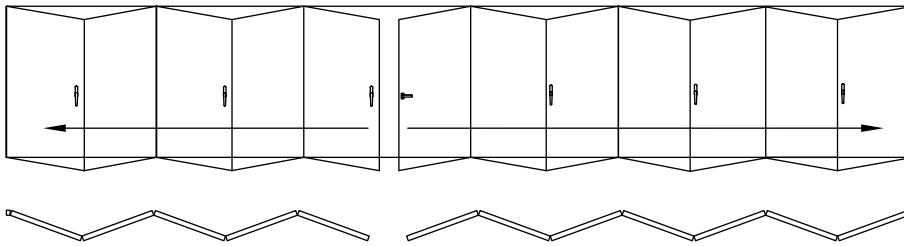
11 Doors

1156



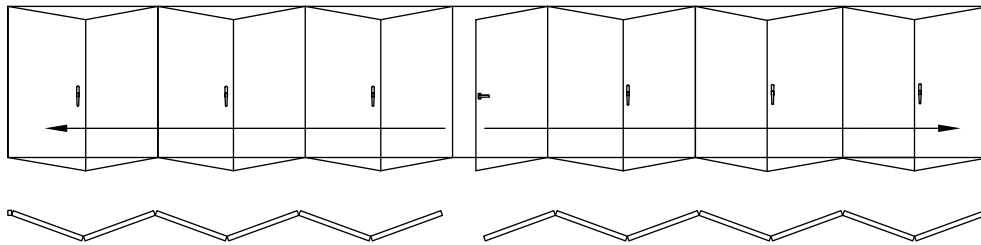
11 Doors

1257



12 Doors

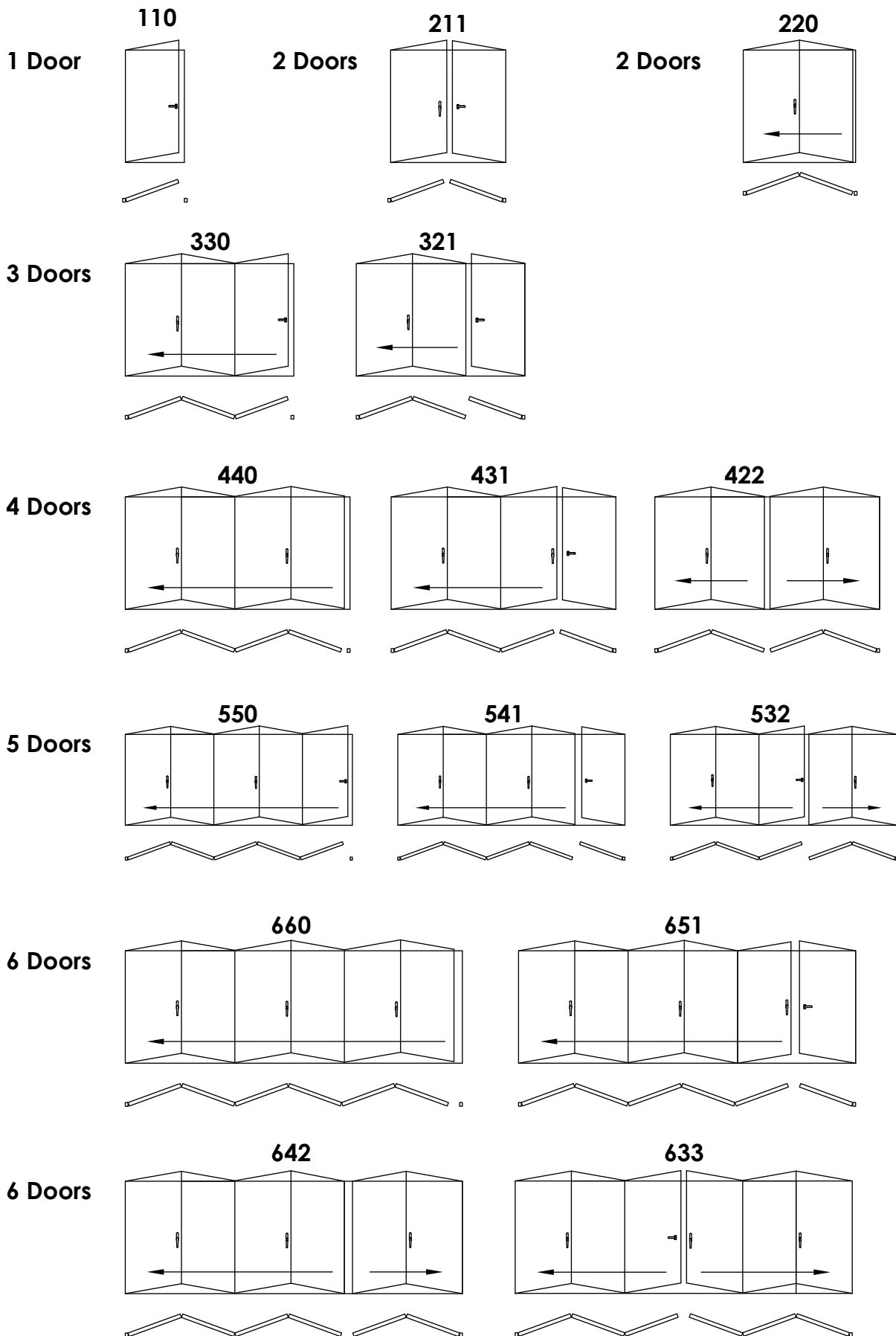
1367



13 Doors

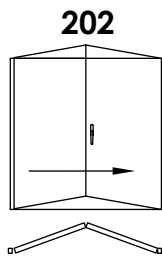


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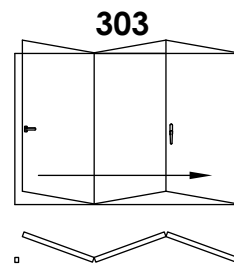
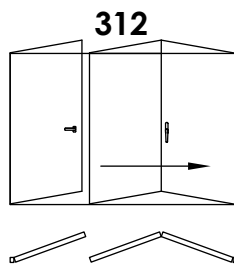
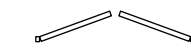




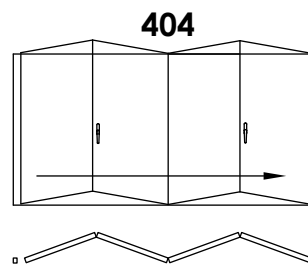
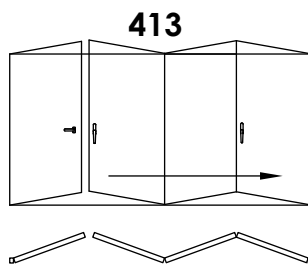
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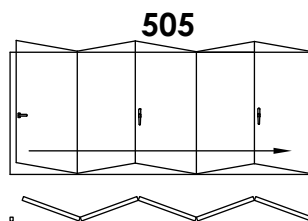
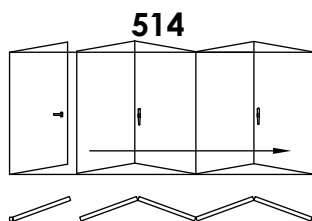
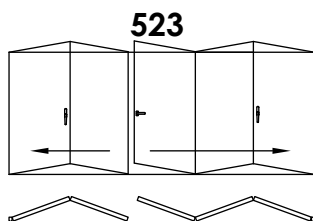
1 Door



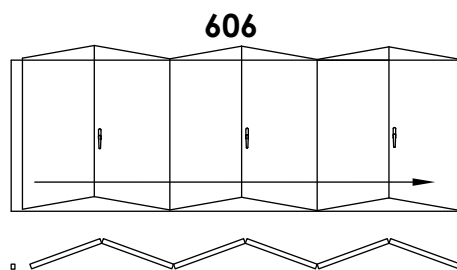
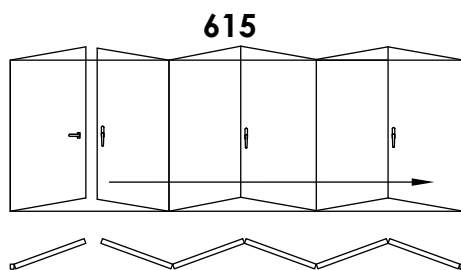
3 Doors



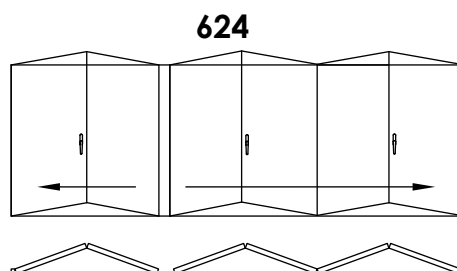
4 Doors



5 Doors

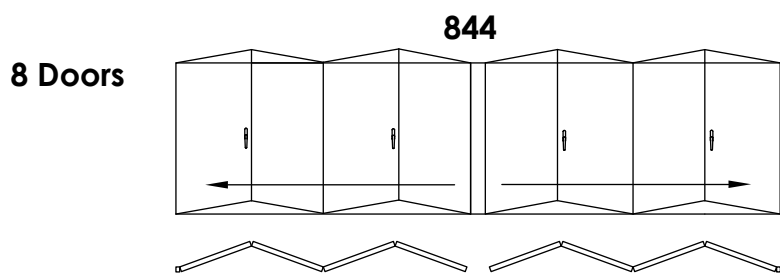
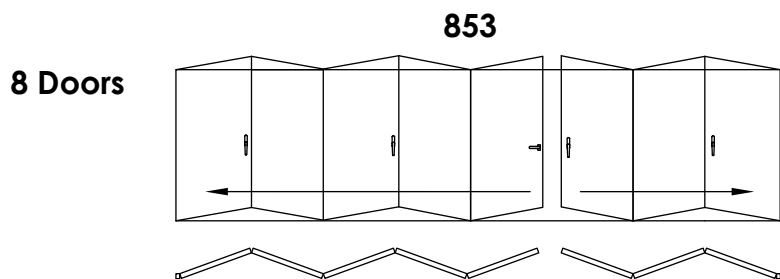
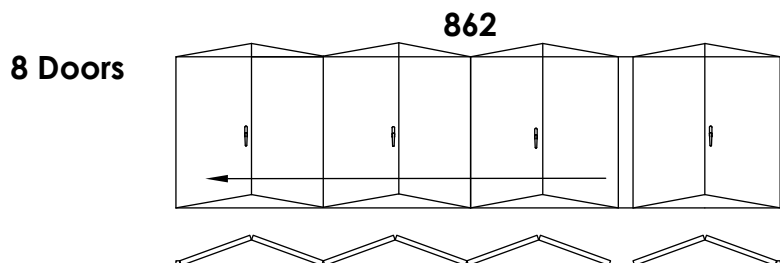
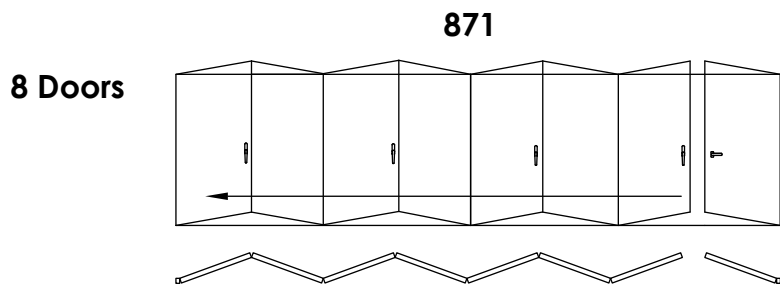
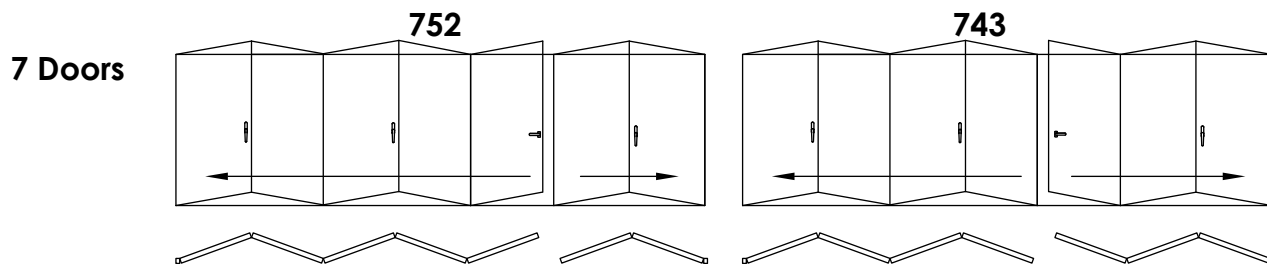
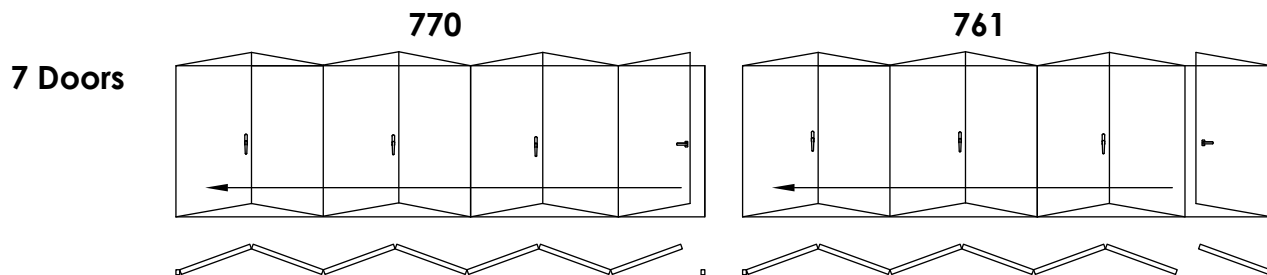


6 Doors

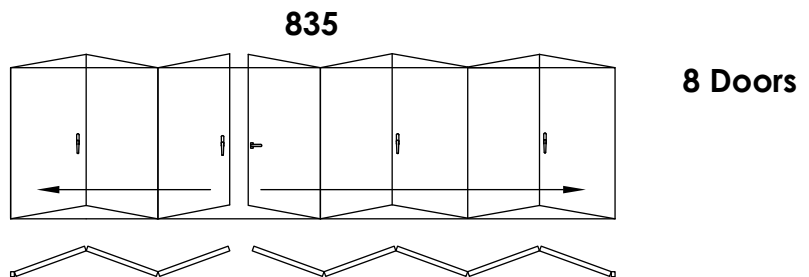
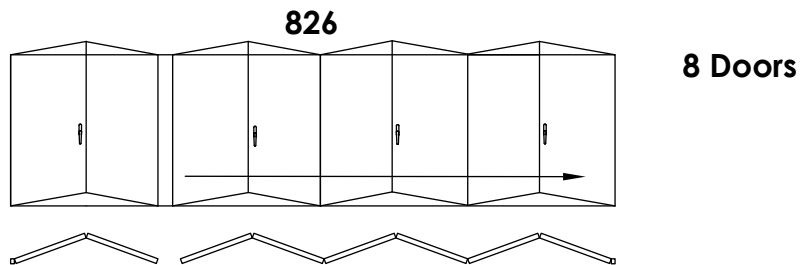
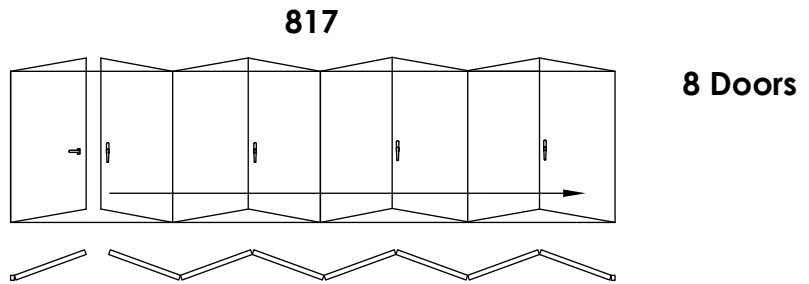
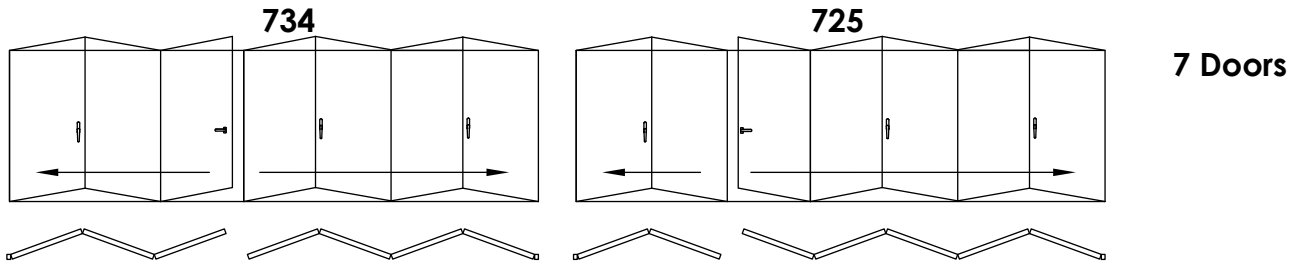
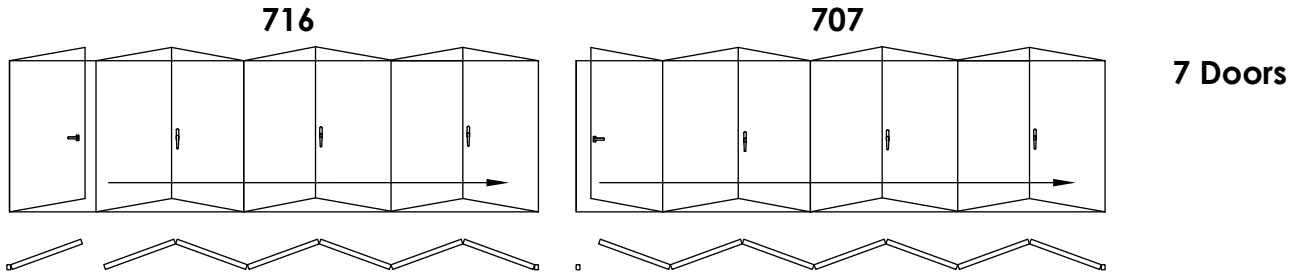


6 Doors

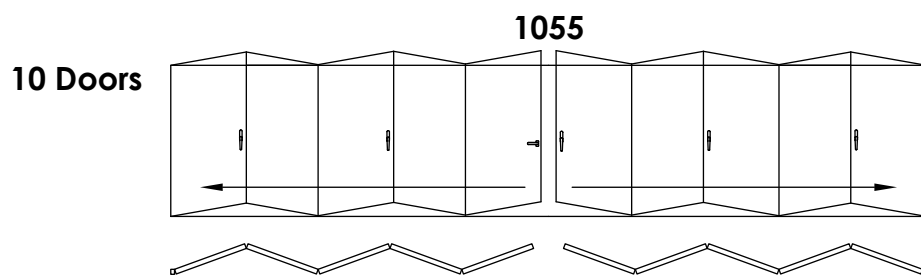
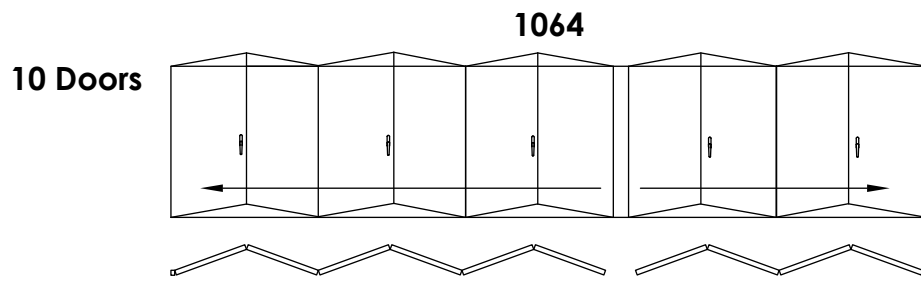
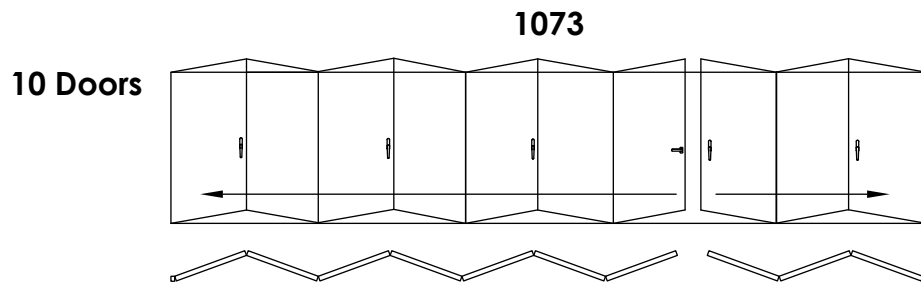
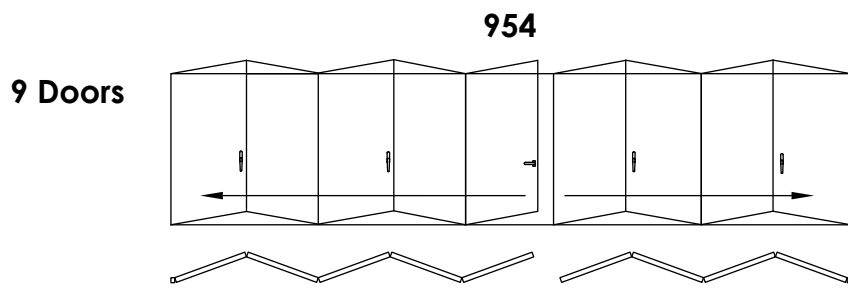
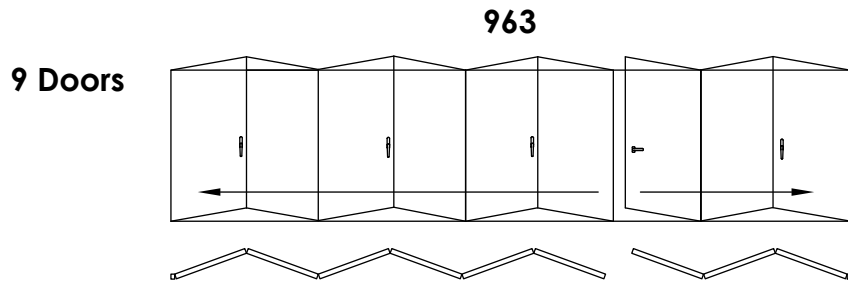
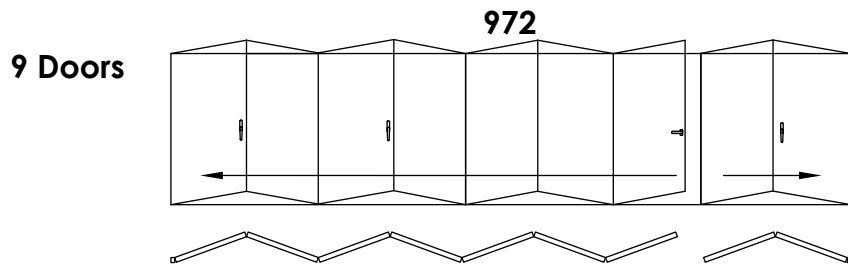




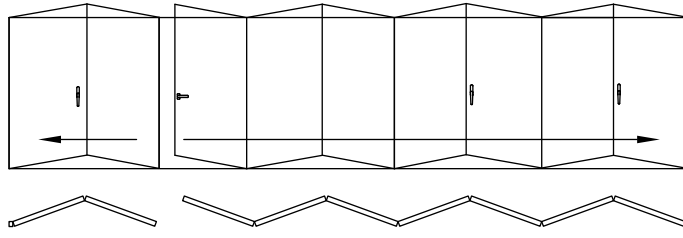
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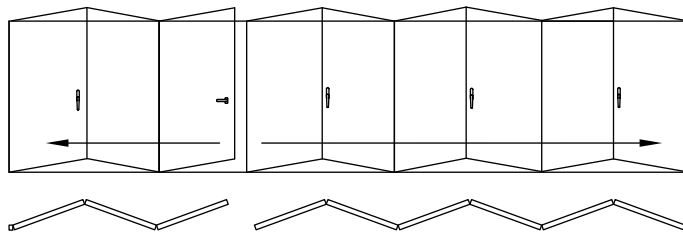


927



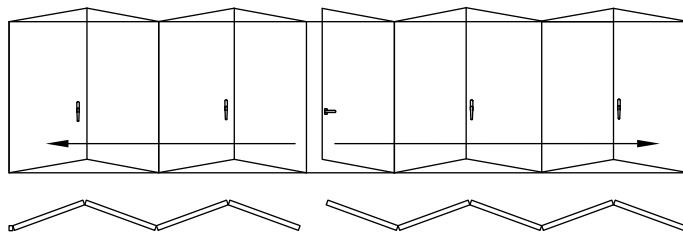
9 Doors

936



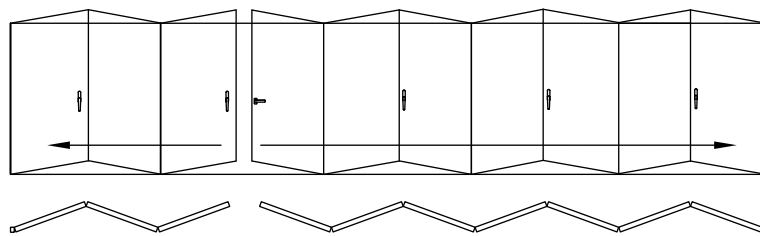
9 Doors

945



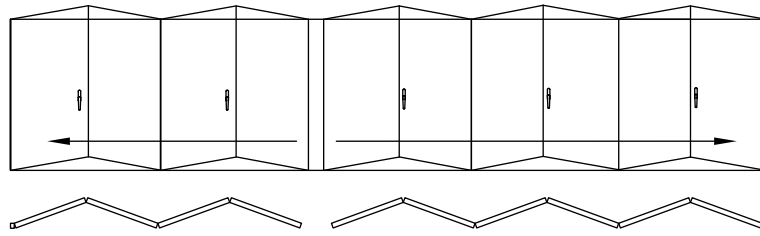
9 Doors

1037

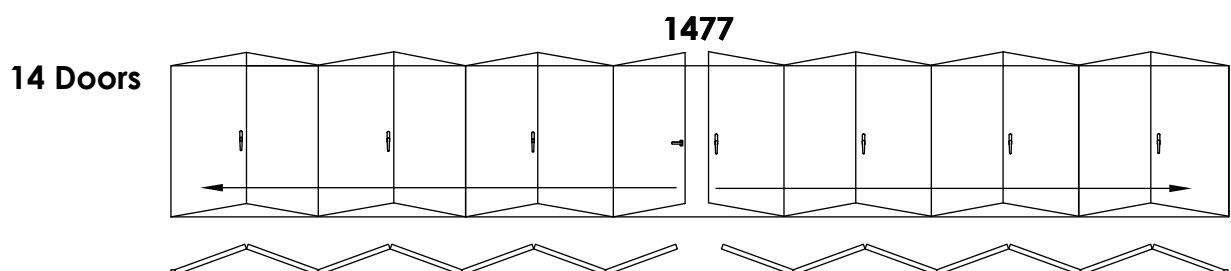
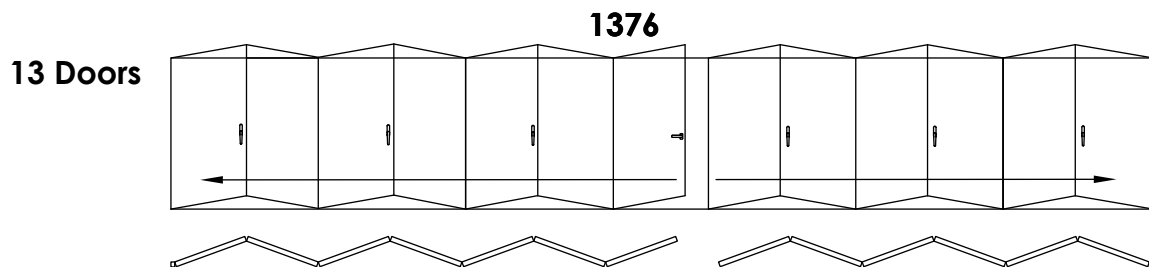
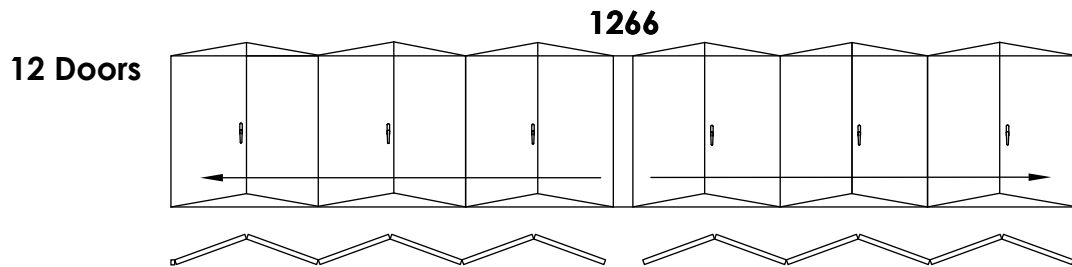
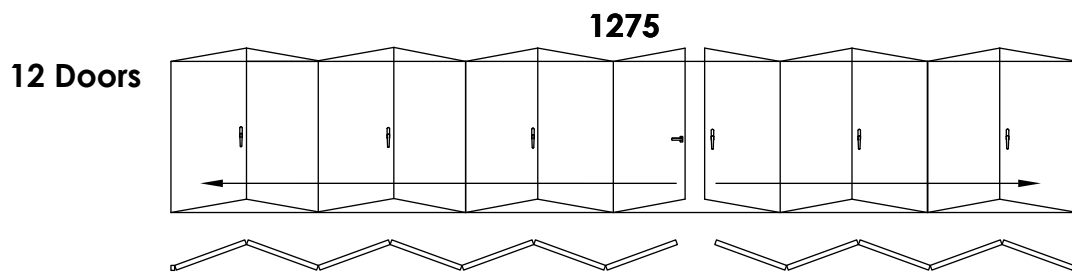
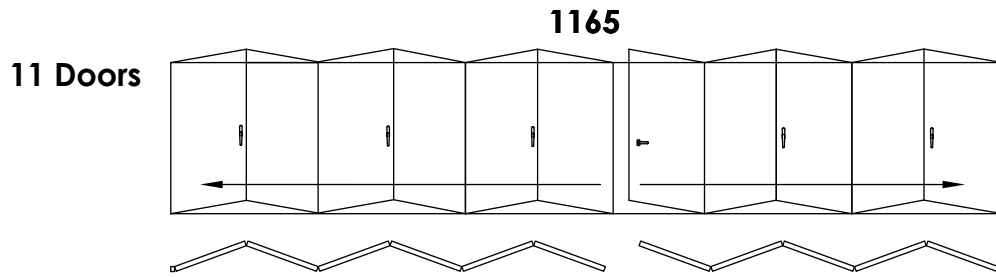
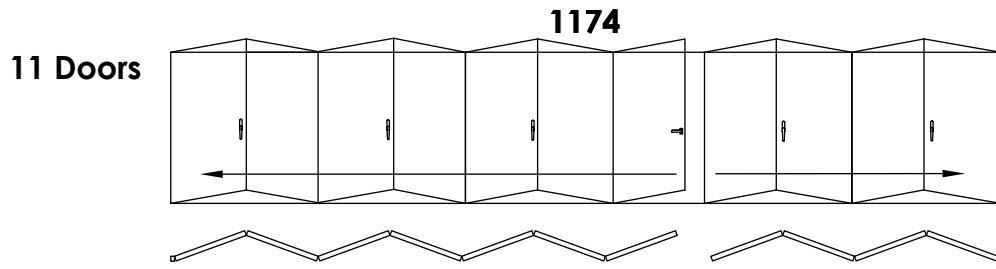


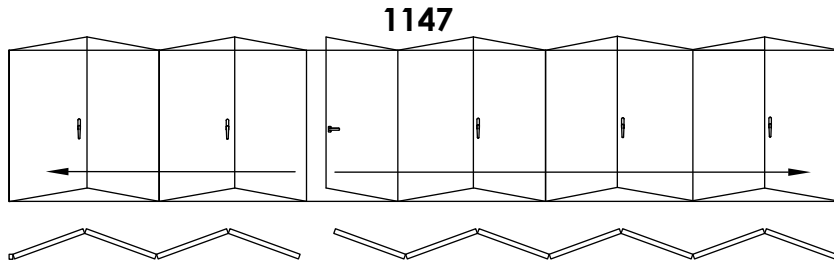
10 Doors

1046

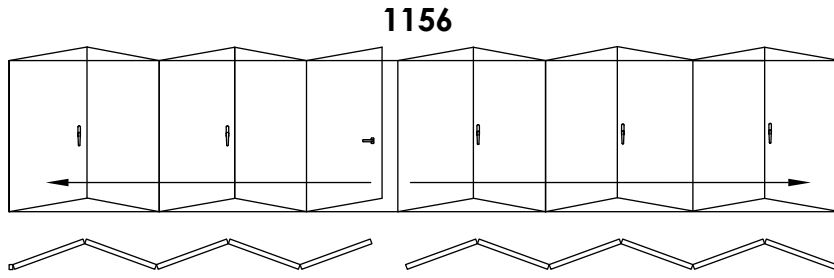


10 Doors

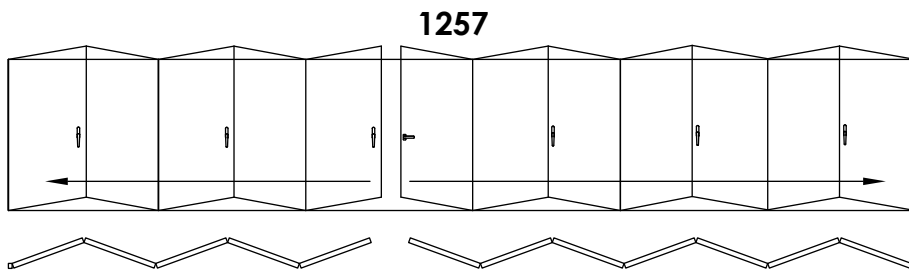




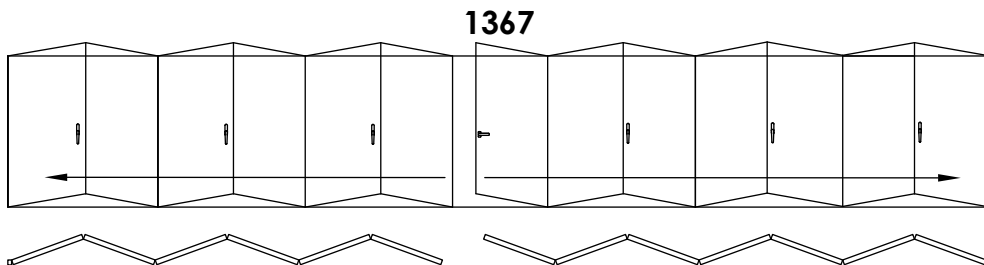
11 Doors



11 Doors



12 Doors



13 Doors